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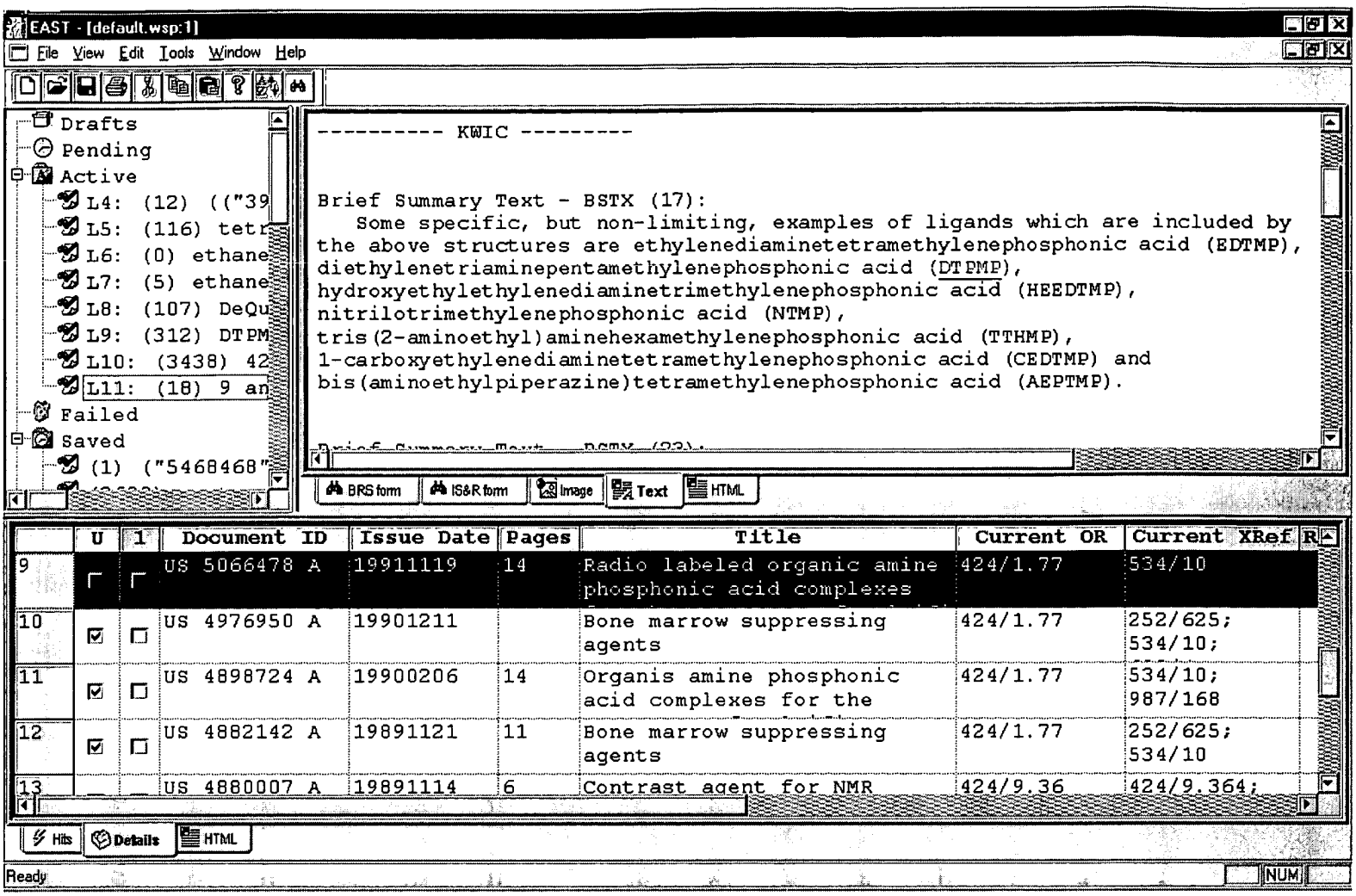
Drafts

BRS form | IS&R form | Image | Text | HTML

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Err
1	IS&R	L4	12	(("3974268") or ("4399817") or ("4882142")	USPAT	2003/09/13 17:30		Server failed to process.	1
2	BRS	L5	116	tetrakis near12 phosphonic	USPAT	2003/09/13 17:34			0
3	BRS	L6	0	ethanediylnitrilobis$	USPAT	2003/09/13 17:35			0
4	BRS	L7	5	ethanediylnitrilo$	USPAT	2003/09/13 17:36			0
5	BRS	L8	107	DeQuest near3 "2066"	USPAT	2003/09/13 17:37			0
6	BRS	L9	312	DTPMP	USPAT	2003/09/13 17:37			0
7	BRS	L10	3438	424/1.11-9.4.ccls.	USPAT	2003/09/13 17:37			0
8	BRS	L11	18	9 and 10	USPAT	2003/09/13 17:37			0

Hits | Details | HTML

Ready NUM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L5: (116) tetr
L6: (0) ethane
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L9: (312) DTPM
L10: (3438) 42
L11: (18) 9 an
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(1) ("5468468"
---------- KWIC ---------
Brief Summary Text - BSTX (17):
Some specific, but non-limiting, examples of ligands which are included by the above structures are ethylenediaminetetramethylenephosphonic acid (EDTMP), diethylenetriaminepentamethylenephosphonic acid (DTPMP), hydroxyethylethylenediaminetrimethylenephosphonic acid (HEEDTMP), nitrilotrimethylenephosphonic acid (NTMP), tris(2-aminoethyl)aminehexamethylenephosphonic acid (TTHMP), 1-carboxyethylenediaminetetramethylenephosphonic acid (CEDTMP) and bis(aminoethylpiperazine)tetramethylenephosphonic acid (AEPTMP).
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Issue Date
Pages
Title
Current OR
Current XRef
9 US 5066478 A 19911119 14 Radio labeled organic amine phosphonic acid complexes 424/1.77 534/10
10 US 4976950 A 19901211 Bone marrow suppressing agents 424/1.77 252/625; 534/10;
11 US 4898724 A 19900206 14 Organis amine phosphonic acid complexes for the 424/1.77 534/10; 987/168
12 US 4882142 A 19891121 11 Bone marrow suppressing agents 424/1.77 252/625; 534/10
13 US 4880007 A 19891114 6 Contrast agent for NMR 424/9.36 424/9.364;
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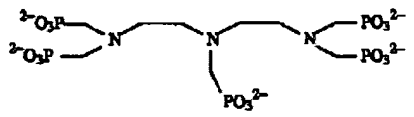
ions. The amount of manganese adsorbed onto the particle surface, as a percentage of the total calcium in the particle, is in the range from about 0.1% to about 10%. Such particles exhibit very high relaxivities and rapid liver enhancement in magnetic resonance imaging studies.

Paramagnetic metal species may also be adsorbed onto apatite particle surfaces through the use of bifunctional coating agents. Examples of possible bifunctional coating agents are chelating agents having one or more phosphonate groups capable of adsorption to the apatite particle surface. One currently preferred bifunctional coating agent is the functionalized polyphosphonate diethylenetriaminepenta(methylenephosphonic acid), abbreviated DETAPMDP, having the following structure:



Once adsorbed to the apatite particle surface, the bifunctional coating agent may form complexes with paramagnetic metal ions. These particles also exhibit very high relaxivities and rapid liver enhancement in magnetic resonance imaging studies.

In some cases, the concentration of nuclei to be measured is not sufficiently high to produce a detectable MR signal. For instance, since ^{19}F is present in the body in very low concentration, a fluorine source must be administered to a subject to obtain a measurable MR signal. Signal sensitivity is improved by administering higher concentrations of fluorine or by coupling the fluorine to a suitable "probe" which will concentrate in the body tissues of interest. High fluorine concentration must be balanced against increased tissue

In the case of hydroxyapatite particles, the XRCM may be included in either the phosphate or calcium solution. The XRCM is preferably in sufficiently high concentrati n that upon precipitation of the apatite particles, the XRCM has a concentration in the particles in the range from about 1% to about 25%, by weight.

Certain radi paque heavy metals, such as bismuth, tungsten, tantalum, hafnium, lanthanum and the lanthanides, barium, molybdenum, niobium, zirconium, and strontium may also be incorporated into apatite particles to provide X-ray contrast. The radiopaque metals are incorporated into apatite particles in the same manner as paramagnetic metal ions, described above.

Apatite Particles for Ultrasound Applications

Ultrasound is a medical diagnostic technique in which sound waves are reflected differently against different types of tissue, depending upon the acoustic impedance of these tissues. There is interest in being able to use some type of contrast agent to obtain an amplification of specific organs. Hydroxyapatite particles may be made echogenic by either of two mechanisms: (1) reflection off high density hydroxyapatite particles or (2) reflection off air trapped within low density hydroxyapatite particles.

Since hydroxyapatite is a porous material, small pockets of gas within the particles render them echogenic, with an impedance less than blood. An ultrasound contrast media would be provided in a two-vial kit form: one vial containing dry hydroxyapatite and the other vial containing a diluent.

For example, appropriately sized particles would be synthesized using a volatile organic solvent and then dried by freeze-drying or lyophilization. The resulting dried particles would have pores filled with gas. Just prior to use, a second vial containing a specific volume of a sterile aqueous diluent, such as isotonic saline and/or buffer, can be aspirated and added to the vial of the dried hydroxyapatite. The

> D ABS BIB HITSTR 1-5

L26 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN

AB Conjugate mols. comprising a ligand bonded to a polymer are disclosed. One such conjugate mol. comprises a ligand bonded to a polymer, a **chelating** agent bonded to the polymer, and a radioisotope **chelated** to the **chelating** agent. The conjugate mols. may be useful in detecting and/or treating tumors or biol. receptors. These conjugate mols. may be synthesized without the necessity of preactivation of the ligand using an SCN-polymer-**chelating** agent precursor. Conjugate mols. incorporating an annexin V ligand are particularly useful for visualizing apoptotic cells. Conjugate mols. incorporating a C225 ligand are particularly useful for targeting tumors expressing EGFR.

AN 2002:849373 CAPLUS

DN 137:358081

TI Diagnostic **imaging** compositions, their methods of synthesis, and use

IN Li, Chun; Wen, Xiaoxia; Wu, Qing-Ping; Wallace, Sydney; Ellis, Lee M.

PA Board of Regents, the University of Texas System, USA

SO PCT Int. Appl., 84 pp.
CODEN: PIXXD2

DT Patent

LA English

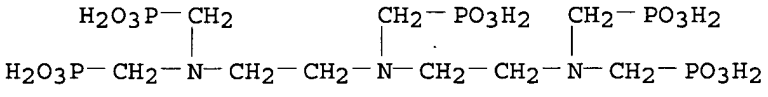
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002087498	A2	20021107	WO 2002-US12510	20020419
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2002197261	A1	20021226	US 2002-126369	20020419
	US 2003003048	A1	20030102	US 2002-126216	20020419
PRAI	US 2001-286453P	P	20010426		
	US 2001-334969P	P	20011204		
	US 2001-343147P	P	20011220		

IT **15827-60-8D**, DTPMP, radiolabeled conjugates
RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(diagnostic **imaging** compns. comprising radiolabeled conjugates)

RN 15827-60-8 CAPLUS

CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



L26 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN

AB The title original plate comprises a water-resistant support coated with an image-receiving layer contg. a (branched and crosslinked) water-sol. noncyclic amine and/or ammonium compd. with mol. wt. .gtoreq.1 .times. 103 having .gtoreq.2 partial structure :NCH2X (X = PO3H2, OPO3H2 or their salt), ZnO, and a binder resin. The plate is manufd. by coating a dispersion contg. the above constituents and a disperse medium on a water-resistant support to form an image-receiving layer. The plate provides high quality printing without greasing upon **imaging** by electrophotog. copiers.

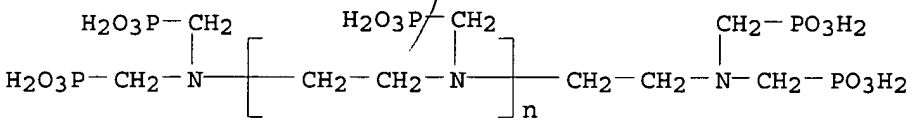
AN 1997:699091 CAPLUS

DN 128:55432

TI Direct **imaging**-type lithographic original plate and its manufacture
IN Tashiro, Hiroshi; Kasai, Kiyosuke; Kato, Eiichi
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 26 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09277732	A2	19971028	JP 1996-94198	19960416
PRAI JP 1996-94198		19960416		

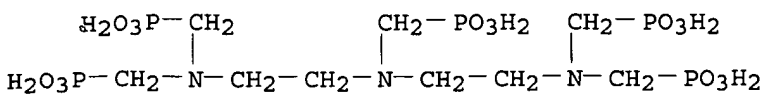
IT **73229-53-5**
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(electrophotog. manufd. lithog. plate with image receiving layer contg. zinc oxide and **chelating** polymer)
RN 73229-53-5 CAPLUS
CN Poly[[(phosphonomethyl)imino]-1,2-ethanediyl], .alpha.-[2-[bis(phosphonomethyl)amino]ethyl]-.omega.-[bis(phosphonomethyl)amino]- (9CI) (CA INDEX NAME)



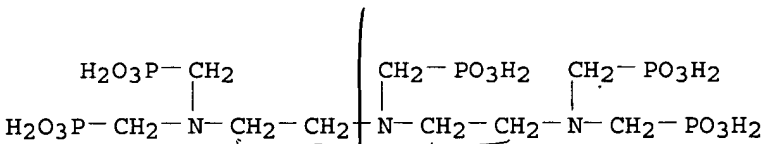
L26 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
AB The title original plate comprises a water-resistant support coated with an image-receiving layer contg. a water-sol. compd. having .gtoreq.1 polar group N[CH2R]2 [R = PO3H2, OPO3H2, these groups may form a salt], ZnO, and a binder resin. The original plate is manufd. by coating a dispersion contg. above 3 components and a disperse medium on a water-resistant support. The original plate provides high quality printing with clear images and without stains even when images are formed by electrostatic transfer process. Thus, a water-resistant support was coated with a compn. contg. C6H4[CH2N(CH2PO3H2)2]2-p, ZnO, a binder resin to give a lithog. original plate.
AN 1997:509620 CAPLUS
DN 127:227461
TI Direct **imaging**-type lithographic original plate and its manufacture
IN Tashiro, Hiroshi; Kasai, Kiyosuke; Kato, Eiichi
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09197685	A2	19970731	JP 1996-5065	19960116
PRAI JP 1996-5065		19960116		

IT **15827-60-8**
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(electrophotog. lithog. plate with image receiving layer contg. phosphorus **chelating** compd. and zinc oxide)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)

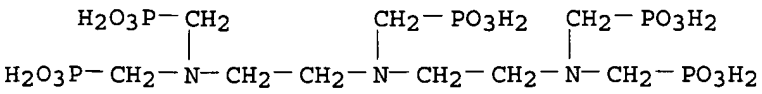


L26 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
AB Ethylenediaminetetra(methylenephosphonic) acid (EDTMP), hexamethylenediaminetetra(methylenephosphonic) acid (HMDTP), diethylenetriaminepenta(methylenephosphonic) acid (DTPMP), and nitrolo-tris(methylene) phosphonate (NTMP) were labeled with 111In or 113Inm by mixing at pH 7.5-8.0 and then filtering. 111In- and 113Inm-labeled EDTMP and DTPMP were than injected in rabbits, and their tissue distributions monitored. All 4 complexes exhibited preferential uptake by the skeleton, with rapid excretion in the urine.
AN 1977:579938 CAPLUS
DN 87:179938
TI Indium-113m labeled polyfunctional phosphonates as bone **imaging** agents
AU Subramanian, G.; McAfee, J. G.; Rosenstreich, M.; Coco, M.
CS Upstate Med. Cent., Syracuse, NY, USA
SO Nuklearmedizin, Supplementum (Stuttgart) (1977), 14, 671-8
CODEN: NMBSAG; ISSN: 0550-3175
DT Journal
LA English
IT **15827-60-8D**, indium-111 and indium-113 **chelates**
RL: BIOL (Biological study)
(scintigraphy with, of bone)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



DTPMP

L26 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
AB 68Ga-ethylenediaminetetramethylene phosphonate (68Ga-EDTMP) and 68Ga-diethylenetriaminepentamethylene phosphonate (68Ga-DTPMP) were prepd. and their biologic distributions in rats and dogs detd. These compds. combine the bone-seeking characteristics of phosphonic acid and the complexing ability of EDTA and DTPA analogs. The **chelates** are administered without gallium carrier. In rats, 50-60% of the carrier-free dose accumulated in bone at 1 h after i.v. injection, while 25-30% was excreted through the urine. In dogs, at 3 h after i.v. injection 35% was found in bone. Although the general patterns of organ distrbution of the 2 68Ga **chelates** were similar, 68Ga-EDTMP appeared superior because of its faster blood clearance. Bone images obtained with this compd. in dogs, using a multidetector positron camera, are presented. The optimum time for **imaging** was 2.5-3 h after injection.
AN 1977:50592 CAPLUS
DN 86:50592
TI New gallium-68-labeled skeletal-**imaging** agents for positron scintigraphy
AU Dewanjee, Mrinal K.; Hnatowich, Donald J.; Beh, Robert
CS Mayo Clin., Rochester, MN, USA
SO Journal of Nuclear Medicine (1976), 17(11), 1003-7
CODEN: JNMEAQ; ISSN: 0161-5505
DT Journal
LA English
IT **15827-60-8DP**, gallium complexes, labeled with gallium-68
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as positron scintigraphy agent for bone)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



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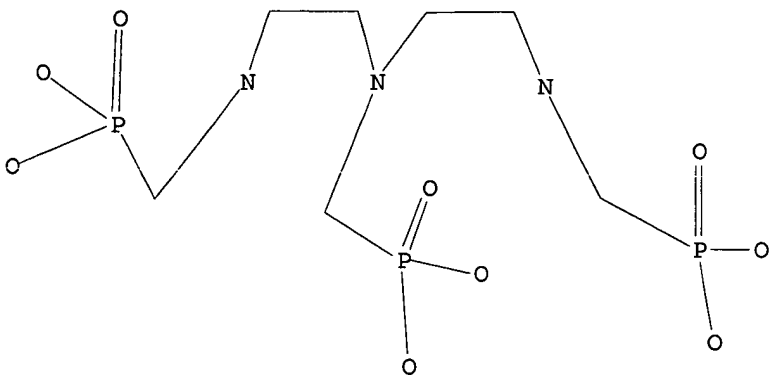

Structure attributes must be viewed using STN Express query preparation.

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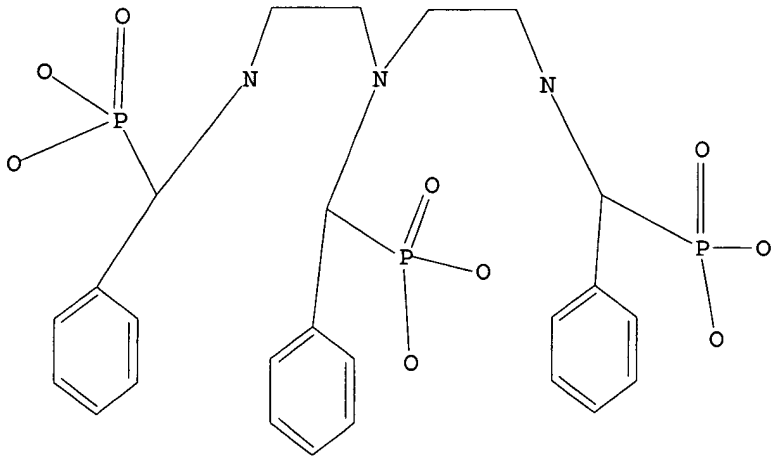
L10 STR



Structure attributes must be viewed using STN Express query preparation.

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L3 166 S L1 FULL

FILE 'CAPLUS' ENTERED AT 16:35:57 ON 13 SEP 2003
L4 1019 S L3
L5 116504 S CHELA?
L6 232 S L4 AND L5
L7 STRUCTURE UPLOADED
S L7

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L8 0 S L7

FILE 'CAPLUS' ENTERED AT 16:39:49 ON 13 SEP 2003
L9 0 S L8

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L10             STRUCTURE UPLOADED
L11           9 S L1
L12           0 S L10
L13           0 S L10 FULL
L14           0 S CHELA?/AB,TI
L15           0 S CHELA?/ABS,TI
L16           0 S CHELA?/AB
L17           0 S CHELA?/ABS
L18           0 S CHELA?/TI
L19           0 S TRIPODAL OR POLYPODAL

     FILE 'CAPLUS' ENTERED AT 16:41:46 ON 13 SEP 2003
L20        1281 S TRIPODAL OR POLYPODAL
L21           0 S L6 AND L20
L22      500454 S MRI OR RESONANCE OR MR
L23           7 S L6 AND L22
L24      129545 S IMAGING
L25          11 S L6 AND L24
L26           5 S L25 NOT L23

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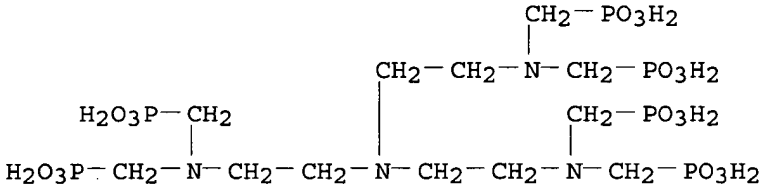
> D 1-16 ABS BIB HITSTR

L4 ANSWER 1 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
AB The soln. contains H2O2, chelates contg. .gtoreq.5 phosphonic acid groups, and optionally alkalis. Cleaning method of the substrate using the soln. is also claimed. The cleaning soln. prevents Al deposition on the substrate and decreases surface metal concn.
AN 2003:317839 CAPLUS
DN 138:330000
TI Cleaning solution for semiconductor substrate
IN Watanabe, Hiroya; Tanaka, Kazunari
PA Mitsubishi Gas Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003124174	A2	20030425	JP 2001-310997	20011009

PRAI JP 2001-310997 20011009
IT **61214-03-7**
RL: TEM (Technical or engineered material use); USES (Uses)
(cleaning soln. contg. H2O2 and chelates contg. phosphonic acid groups for semiconductor substrate)
RN 61214-03-7 CAPLUS
CN Phosphonic acid, [nitrilotris[2,1-ethanediylnitrilobis(methylene)]]hexakis- (9CI) (CA INDEX NAME)

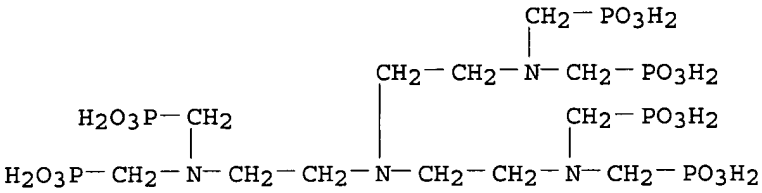


L4 ANSWER 2 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
AB A semiconductor substrate cleaning soln. is provided, which holds down the metal concn. on the substrate surface at extremely low level. Disclosed is a semiconductor substrate cleaning soln. contg. alkali, hydrogen peroxide, and a chelating compd. possessing .gtoreq.1 phosphonic acid group in which each calcium and sodium content of the chelating compd. is below 1 ppm, resp. The each content of calcium and sodium is lowered below 1 ppm by passing a 1-50 % (by wt.) aq. soln. of the above chelating compd. through a packed phase of strongly acidic ion exchange resin at space velocity of 0.5-50 h-. This cleaning soln. removes microparticles and simultaneously inhibits the adhesion of metal contaminants on the surface of a semiconductor substrate. Thus, 1 N aq. H2SO4 was passed through a column of 50 mL Amberlite IR120B (Na form) at 5 h- for 3 h, followed by washing the column with ion-exchanged water and then passing 200 mL 10 % (by wt.) soln. of diethylenetriaminepenta(methylenephosphonic acid) (DTPP) through the column at 10 h- to give a soln. of DTPP. The calcium and sodium concn. based on 100% DTPP was reduced from 49 and 28 ppm to 0.2 and 0.3 ppm, resp. SC-1 cleaning of n-type silicon wafer with <111> orientation was carried out at 80.degree. for 10 min using a SC-1 cleaning soln. contg. a 1:4:20 mixt. of 29% (by wt.) aq. NH3 (electronics industry grade), 31% (by wt.) aq. H2O2 (electronics industry grade), and ultrapure H2O and 10 ppm DTPP. After cleaning, the calcium adhesion on the substrate was .ltoreq.5 X 109 atoms.
AN 2003:317838 CAPLUS
DN 138:347367
TI Cleaning solution of semiconductor substrate
IN Watanabe, Hiroya; Tanaka, Kazunari
PA Mitsubishi Gas Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003124173	A2	20030425	JP 2001-310996	20011009
PRAI JP 2001-310996		20011009		

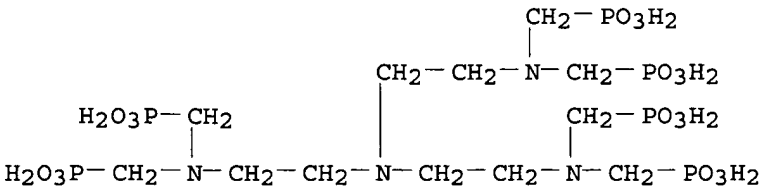
IT **61214-03-7**, Tri(2-aminoethyl)aminehexa(methylenephosphonic acid)
RL: NUU (Other use, unclassified); USES (Uses)
(chelating agent; cleaning soln. contg. chelating compds. having phosphonic acid groups for semiconductor substrate)
RN 61214-03-7 CAPLUS
CN Phosphonic acid, [nitrilotris[2,1-ethanediylnitrilobis(methylene)]]hexakis- (9CI) (CA INDEX NAME)

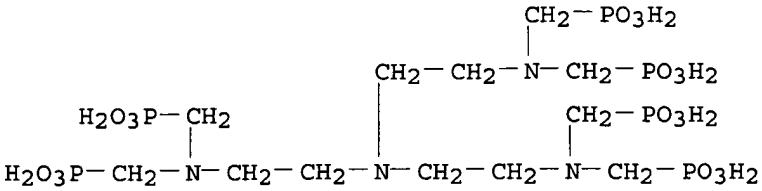


L4 ANSWER 3 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
AB A deodorant, for substances contg. hydrogen sulfide or mercaptans, which includes a combination of a peroxide and a nitrate ion, a combination of a peroxide, a nitrate ion and a metal salt, or a combination of a chelating agent and one of the above combinations, and a process for deodorization comprising treating a substance for treatment, contg. hydrogen sulfide or mercaptans, with the above deodorant. Smell caused by hydrogen sulfide or mercaptans is effectively removed by the deodorant. Smell from wastewater, sludge, and water discharged from washing apparatuses can be efficiently removed with use of the deodorant in a small amt. in accordance with this process.
AN 2002:960578 CAPLUS
DN 138:43754
TI Deodorant and process for deodorization using said deodorant
IN Hamaguchi, Takayoshi; Minato, Kazuyuki; Matsumoto, Toshimi; Shimomura, Tadashi
PA Mitsubishi Gas Chemical Company, Inc., Japan
SO U.S., 18 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6495096	B1	20021217	US 1998-124839	19980730
PRAI US 1998-124839		19980730		

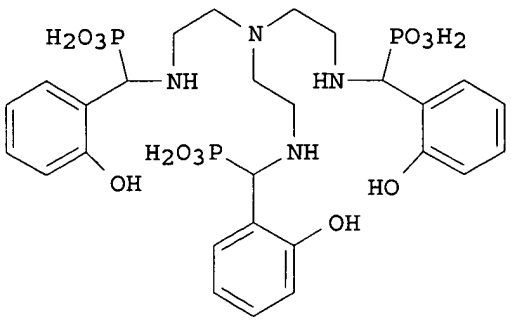
IT **61214-03-7**
RL: NUU (Other use, unclassified); USES (Uses)
(chelating agent; deodorant and it use in deodorizing sulfurous smells from wastewater and wastewater sludge)
RN 61214-03-7 CAPLUS
CN Phosphonic acid, [nitrilotris[2,1-ethanediylnitrilobis(methylene)]]hexakis- (9CI) (CA INDEX NAME)





RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
GI



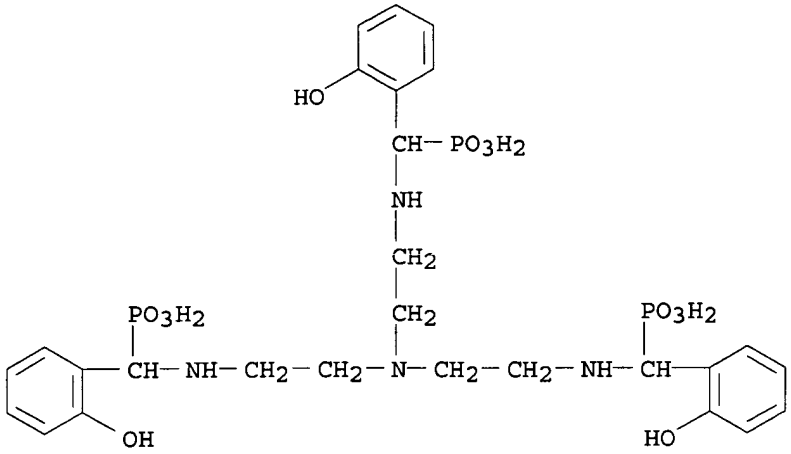
I

AB Tripodal polyaminophosphonate chelants are disclosed, as well as chelates of the chelants with metal ions to form radiopharmaceutical and radioactive, MRI and X-ray or CT imaging compds. and compns. Therapeutic and imaging methods of use are also disclosed. E.g., I was prepd. and complexed with 111In, 90Y, and 177Lu.

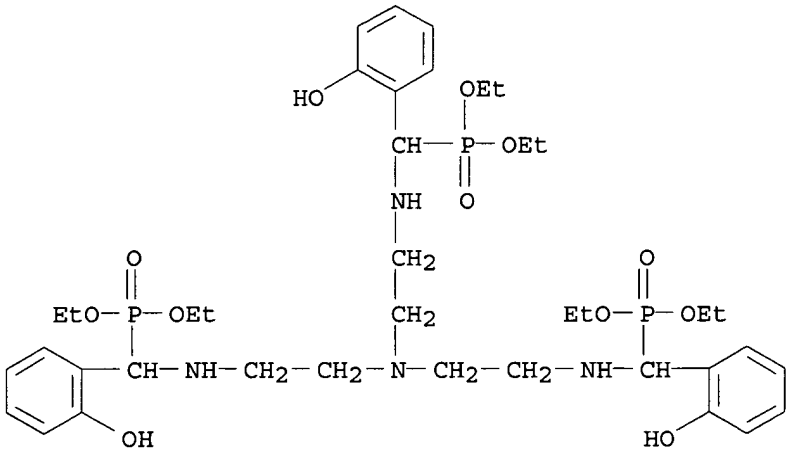
AN 2002:522419 CAPLUS
DN 137:99070
TI Polypodal chelants for metallopharmaceuticals
IN Liu, Shuang
PA USA
SO U.S. Pat. Appl. Publ., 18 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2002090342	A1	20020711	US 2001-33770	20011227
PRAI US 2001-260615P	P	20010109		

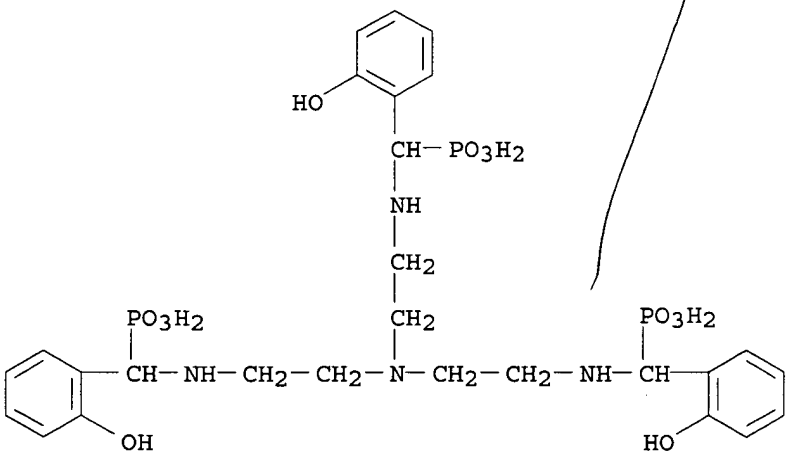
OS MARPAT 137:99070
IT **441028-20-2P 441028-21-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(polypodal chelants for metallopharmaceuticals)
RN 441028-20-2 CAPLUS
CN Phosphonic acid, [nitrilotris[2,1-ethanediylimino[(2-hydroxyphenyl)methylene]]]tris- (9CI) (CA INDEX NAME)



RN 441028-21-3 CAPLUS
CN Phosphonic acid, [nitrilotris[2,1-ethanediylimino[(2-hydroxyphenyl)methylene]]]tris-, hexaethyl ester (9CI) (CA INDEX NAME)



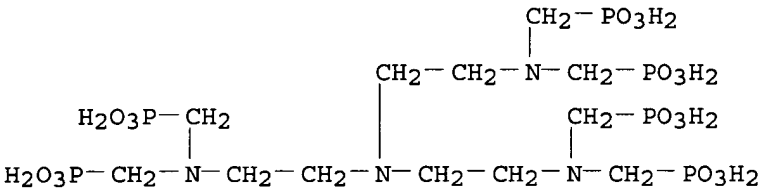
IT **441028-20-2DP**, Lu-177 complexes
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polypodal chelants for metallopharmaceuticals)
RN 441028-20-2 CAPLUS
CN Phosphonic acid, [nitrilotris[2,1-ethanediylimino[(2-hydroxyphenyl)methylene]]]tris- (9CI) (CA INDEX NAME)



L4 ANSWER 5 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
AB The method is used for accurate quantitation of additives in high purity hydrogen peroxide water soln. The sample soln. is irradiated by using an UV radiation to decomp. H2O2 and the residue soln. is anal. by ion chromatog. The org. phosphonic chelate can be detd. by the method.
AN 2001:635608 CAPLUS
DN 135:220361
TI Analysis of high purity hydrogen peroxide water solution
IN Nankawa, Koji; Matsubara, Masahide
PA Mitsubishi Gas Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001235457	A2	20010831	JP 2000-44272	20000222

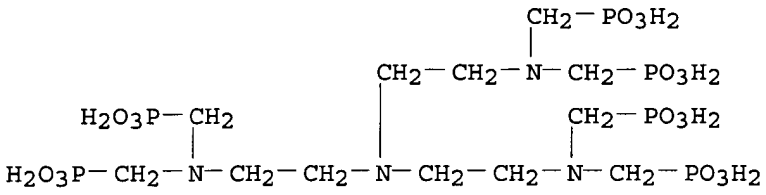
PRAI JP 2000-44272 20000222
IT **61214-03-7**
RL: ANT (Analyte); ANST (Analytical study)
(anal. of high purity hydrogen peroxide water soln. by ion chromatog.)
RN 61214-03-7 CAPLUS
CN Phosphonic acid, [nitrilotris[2,1-ethanediylnitrilobis(methylene)]]hexakis- (9CI) (CA INDEX NAME)



L4 ANSWER 6 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
AB In the tile process aminophosphonic acids are slurried in neutral or acidic water, heated to reflux, cooled, and then filtered. Product purities approaching 100 % are thus obtained.
AN 1995:763702 CAPLUS
DN 123:144277
TI Non-alkaline purification of aminophosphonic acids
IN Belinka, Banjamin A., Jr.; Coughlin, Daniel J.
PA Cytogen Corp., USA
SO PCT Int. Appl., 13 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9512586	A1	19950511	WO 1994-US10106	19940915
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN				
RW: KE, MW, SD, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5495042	A	19960227	US 1993-145591	19931104
CA 2175221	AA	19950511	CA 1994-2175221	19940915
AU 9478317	A1	19950523	AU 1994-78317	19940915
EP 724576	A1	19960807	EP 1994-929152	19940915
EP 724576	B1	20020320		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
BR 9407990	A	19961203	BR 1994-7990	19940915
JP 09504545	T2	19970506	JP 1994-513198	19940915
JP 2894839	B2	19990524		

AT 214705 E 20020415 AT 1994-929152 19940915
PRAI US 1993-145591 A 19931104
WO 1994-US10106 W 19940915
IT **61214-03-7P**
RL: PUR (Purification or recovery); PREP (Preparation)
(non-alk. purifn. of aminophosphonic acids)
RN 61214-03-7 CAPLUS
CN Phosphonic acid, [nitrilotris[2,1-ethanediylnitrilobis(methylene)]]hexakis- (9CI) (CA INDEX NAME)

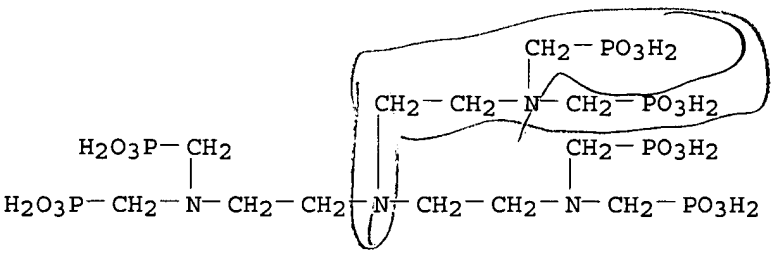


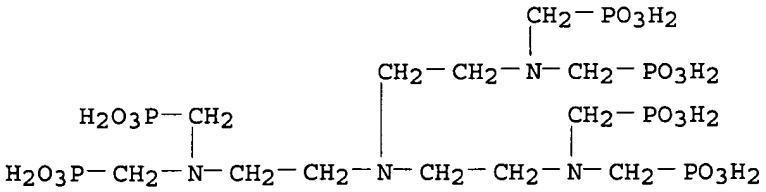
L4 ANSWER 7 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
AB Particle-emitting radionuclides, e.g. Gd-159, Ho-166, Lu-177 and Yb-175, have been complexed with org. aminoalkylenephosphonic acids (Markush included). These complexes have been found useful in compns. for the therapeutic treatment of calcific tumors or the relief of bone pain in animals. Syntheses and biodistribution datas are included. Efficacy of a complex of ethylenediaminetetramethylenephosphonic acid with 153Sm in treating a dog with undifferentiated sarcoma metastatic to bone is described; the same complex was used in scintigraphic imaging of humans with metastatic bone cancer.
AN 1994:453225 CAPLUS
DN 121:53225
TI Organic amine phosphonic acid complexes with particle-emitting radionuclides for the treatment of calcific tumors
IN Simon, Jaime; Garlich, Joseph R.; Goeckeler, William F.; Wilson, Davis A.; Volkert, Wynn A.; Troutner, David E.
PA Dow Chemical Co., USA
SO U.S., 14 pp. Cont.-in-part of U.S. 5,066,478.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 5

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5300279	A	19940405	US 1990-629894	19901219
	US 4898724	A	19900206	US 1987-50263	19870514
	US 5066478	A	19911119	US 1990-472506	19900130
PRAI	US 1984-616985	B2	19840604		
	US 1985-738010	B2	19850528		
	US 1985-803376	B2	19851204		
	US 1987-50263	A3	19870514		
	US 1990-472506	A2	19900130		

DTPMP

IT **61214-03-7D**, Tris(2-aminoethyl)aminehexamethylenephosphonic acid, complexes with samarium-153
RL: BIOL (Biological study)
(biodistribution of, bone cancer treatment in relation to)
RN 61214-03-7 CAPLUS
CN Phosphonic acid, [nitrilotris[2,1-ethanediylnitrilobis(methylene)]]hexakis- (9CI) (CA INDEX NAME)





L4 ANSWER 8 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

AB Metal ions, e.g., Sb3+, Zr4+, Zn2+, Pu4+, Hf4+, Cu2+, Ni2+, Fe3+, Cd2+, Ag+, and Hg2+ are removed from wastewaters by contacting with an aminoalkylphosphonic acid-contg. ligand covalently bonded through an org. spacer Si group to a solid inorg. support. The compd. has an affinity for the targeted ions to form a complex to remove the ions from the source soln.

AN 1993:197429 CAPLUS

DN 118:197429

TI Aminoalkylphosphonic acid-containing ligands attached to solid supports for removal of metal ions

IN Bruening, Ronald L.; Tarbet, Bryon J.; Bradshaw, Jerald S.; Izatt, Reed M.; Krakowiak, Krzysztof E.

PA Brigham Young University, USA

SO U.S., 7 pp.
CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

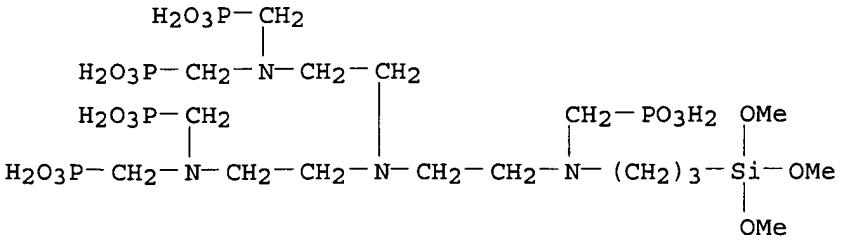
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5182251	A	19930126	US 1991-774547	19911010
	WO 9306923	A1	19930415	WO 1992-US7776	19920914
	W: AU, CA, FI, JP, KR, NO, PL, RU				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE				
	AU 9226931	A1	19930503	AU 1992-26931	19920914
	AU 656032	B2	19950119		
	EP 621801	A1	19941102	EP 1992-920750	19920914
	EP 621801	B1	19971210		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE				
	PL 170767	B1	19970131	PL 1992-303125	19920914
	AT 160952	E	19971215	AT 1992-920750	19920914
	ES 2110525	T3	19980216	ES 1992-920750	19920914
	JP 3241380	B2	20011225	JP 1993-506919	19920914
	CA 2120242	C	20021203	CA 1992-2120242	19920914
	ZA 9207424	A	19930402	ZA 1992-7424	19920928
	CN 1088485	A	19940629	CN 1992-114641	19921219
	CN 1041694	B	19990120		
	US 5273660	A	19931228	US 1993-7075	19930121
	FI 9401623	A	19940408	FI 1994-1623	19940408
	NO 9401295	A	19940411	NO 1994-1295	19940411
PRAI	US 1991-774547	A	19911010		
	WO 1992-US7776	A	19920914		

OS MARPAT 118:197429

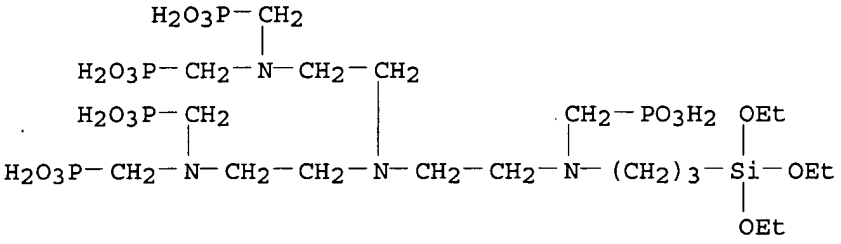
IT **147196-84-7 147196-85-8**
RL: PROC (Process)
(complexation with, in metal removal from wastewaters)

RN 147196-84-7 CAPLUS

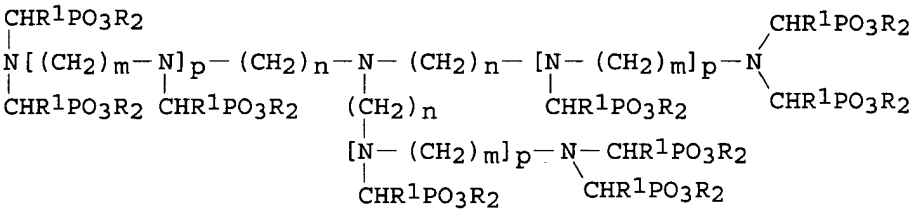
CN Phosphonic acid, [[[2-[(phosphonomethyl)[3-(trimethoxysilyl)propyl]amino]ethyl]imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



RN 147196-85-8 CAPLUS
CN Phosphonic acid, [[[2-[(phosphonomethyl)[3-(triethoxysilyl)propyl]amino]ethyl]imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



L4 ANSWER 9 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
GI



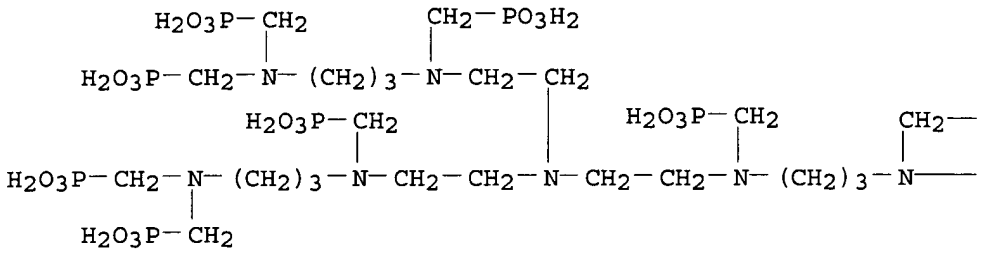
I

AB The formation of Ba scale in well injection water having Ba contents of 700-3000 ppm and a pH of 4-6 is prevented using inhibitors (I), where R is H, Me, Et, or M, R' is H, Me, CH3, CR3, C6H5, SO3H2, M is an alkali metal or ammonium ion and n is 2-10, m is 2-10, and p is 0-10. The inhibitors may be used in either partially or fully neutralized form, preferably in the form of the sodium salt. They are added to the formation water in concns. of 5-200 ppm. They remain active and thermally stable up to 150.degree. and may be used downhole as part of a squeeze technique or injected on an offshore platform.
AN 1992:654676 CAPLUS
DN 117:254676
TI Method for inhibiting scale formation in barium-containing formation waters used for petroleum reservoir injection
IN Doyle, Michael Joseph; Ostovar, Peyman; Walker, Patricia Alexandria Mary
PA Britoil PLC, UK
SO Brit. UK Pat. Appl., 8 pp.
CODEN: BAXXDU
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI GB 2248831	A1	19920422	GB 1991-20257	19910923
PRAI GB 1990-21621		19901004		
GB 1991-783		19910115		

OS MARPAT 117:254676
IT **144754-15-4**
RL: USES (Uses)
(scale inhibitor, for injection waters for petroleum reservoirs)
RN 144754-15-4 CAPLUS
CN Phosphonic acid, [nitrilotris[2,1-ethanediyl[(phosphonomethyl)imino]-3,1-propanediylnitrilobis(methylene)]]hexakis- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

—— PO_3H_2

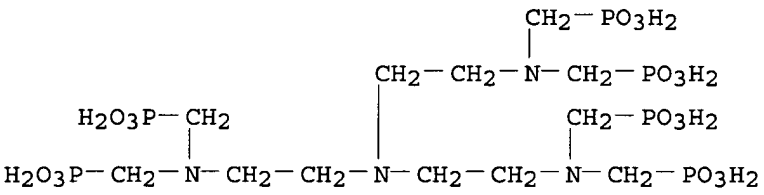
— CH_2— PO_3H_2

L4 ANSWER 10 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
AB Radiopharmaceutical formulations comprise .gtoreq.1 radionuclide complexes with a ligand, esp., Sm153 ethylenediaminetetramethylenephosphonic acid (EDTMP) and optionally contains a divalent metal ion, e.g. Ca to minimize the presence of free ligand to be introduced into the blood stream. The formulations are frozen to reduce the radiolysis, then thawed prior to use. Thus, a soln. contg. 0.08 M EDTMP and 3x10-4 M Sm (100 mCi Sm153/mL) was prepd. and 200 .mu.L aliquots were placed in plastic vials and frozen using a dry ice-acetone bath. A frozen vial was allowed to thaw at ambient temp. and the soln. was analyzed by HPLC; the results showed only 1 radiometric peak corresponding to the desired product (no degrdn. product) for over a 60 h period.
AN 1992:113537 CAPLUS
DN 116:113537
TI Radiopharmaceutical formulations, their method of administration and process of preparation
IN Simon, Jaime; Garlich, Joseph R.; Frank, R. Keith; McMillan, Kenneth
PA Dow Chemical Co., USA
SO Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 462787	A1	19911227	EP 1991-305485	19910618
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
BR 9102579	A	19920121	BR 1991-2579	19910614
SK 279598	B6	19990111	SK 1991-1842	19910614
AU 9178470	A1	19911219	AU 1991-78470	19910617
AU 651112	B2	19940714		
CA 2044812	AA	19911219	CA 1991-2044812	19910617
CA 2044812	C	20021231		
FI 9102933	A	19911219	FI 1991-2933	19910617
FI 101044	B	19980415		
NO 9102345	A	19911219	NO 1991-2345	19910617

	HU 57994	A2	19920128	HU 1991-2011	19910617
	CN 1063615	A	19920819	CN 1991-104343	19910617
	CN 1033143	B	19961030		
	JP 04230224	A2	19920819	JP 1991-144735	19910617
	ZA 9104615	A	19930224	ZA 1991-4615	19910617
	IN 173170	A	19940226	IN 1991-MA462	19910617
	IL 98536	A1	19961031	IL 1991-98536	19910617
	RU 2095085	C1	19971110	RU 1991-4895658	19910617
	JP 2002114712	A2	20020416	JP 2001-314293	19910617
	PL 165699	B1	19950131	PL 1991-290717	19910618
	ES 2073678	T3	19950816	ES 1991-305485	19910618
	IN 175106	A	19950429	IN 1993-MA177	19930310
	US 5762907	A	19980609	US 1993-133806	19931007
	AU 9464559	A1	19940804	AU 1994-64559	19940606
	AU 665911	B2	19960118		
PRAI	US 1990-538871	A	19900618		
	IN 1991-MA462	A1	19910617		
	JP 1991-144735	A3	19910617		

IT **61214-03-7D**, radionuclide complexes
RL: BIOL (Biological study)
(radiopharmaceutical formulations contg.)
RN 61214-03-7 CAPLUS
CN Phosphonic acid, [nitrilotris[2,1-ethanediylnitrilobis(methylene)]]hexakis- (9CI) (CA INDEX NAME)

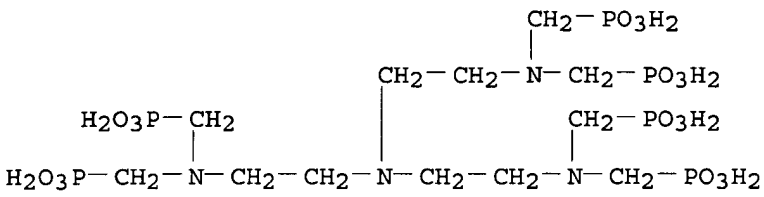


L4 ANSWER 11 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
AB Hematol. malignancy in an animal is treated by using a polyvalent particle-emitting radionuclide (153Sm, 89Sr, 90Y, etc.) to label a bone-localizing chelating agent (EDTMP, HEDP, etc.) and administering this agent to affect the bone marrow, but in a dosage close to but less than a level which will cause complete bone marrow ablation, and administering a cytotoxic pharmaceutical (e.g. melphalan or a deriv. or analog thereof) in a dose sufficient to affect bone marrow, but also in a dose close to but less than a level which will cause complete bone marrow ablation. In rats receiving endoradiotherapy with 153Sm-EDTMP (555 mBq/kg) followed 5 days later by 9.5 mg melphalan/kg and marrow transplantation on day 6, the survival rate was >90%. Controls not receiving transplantation had a survival rate of .apprx.20%. Other expts. showed that marrow transplantation needs to be delayed until the effects of the endoradiotherapy have diminished.
AN 1992:54748 CAPLUS
DN 116:54748
TI Bone-specific chelating agent-radionuclide complex and cytotoxic agent for bone marrow treatment in hematological malignancy
IN Turner, Harvey J.; Claringbold, Phillip G.
PA Australian Nuclear Science and Technology Organisation, Australia
SO PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9116075	A1	19911031	WO 1991-AU155	19910419

W: AT, AU, BB, BG, BR, CA, CH, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MC, MG, MW, NL, NO, RO, SD, SE, SU, US
RW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, DK, ES, FR, GA, GB, GR, IT, LU, ML, MR, NL, SE, SN, TD, TG

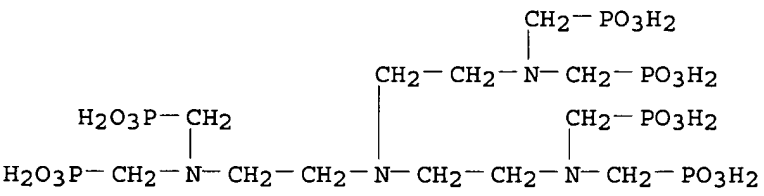
AU 9177571 A1 19911111 AU 1991-77571 19910419
AU 640784 B2 19930902
PRAI AU 1990-9726 19900420
WO 1991-AU155 19910419
IT **61214-03-7D**, radionuclide complexes
RL: BIOL (Biological study)
(and cytotoxic agent in bone marrow ablation prior to transplant for hematol. neoplasm treatment)
RN 61214-03-7 CAPLUS
CN Phosphonic acid, [nitrilotris[2,1-ethanediylnitrilobis(methylene)]]hexakis- (9CI) (CA INDEX NAME)



L4 ANSWER 12 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
AB The title compns. contain Fe3+ complexes of amino acids of the formula (A1CH2)(A2CH2)NY1N[Y2N(CH2A3)(CH2A4)][Y3N(CH2A5)(CH2A6)] (A1-A6 = CO2M, PO(OM)2; M = H, alkali metal, cation; Y1-Y3 = a divalent org. group). These compns. provide a fast bleaching rate in the presence of developer components carried in from the previous step, and do not pollute the environment. Thus, an exposed color film was developed and treated with a bleach-fix soln. contg. the Fe3+ complex of (NaO2CCH)2NCH2CH2N[CH2CH2N(CH2CO2Na)2]2 (I), EDTA, Na thiosulfate, (NH4)2SO3, and color developer, and subsequently treated with a stabilizer. The residual Ag was 0.3 mg/m2 vs. 3.9 mg/m2 for color film treated with bleach-fix soln. contg. EDTA Fe3+ complex instead of I. The use of I in a bleaching soln. (without a fixer) proved effective also.
AN 1990:431858 CAPLUS
DN 113:31858
TI Photographic processing compositions
IN Kuze, Satoru
PA Konica Co., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01321434	A2	19891227	JP 1988-155210	19880622

PRAI JP 1988-155210 19880622
OS MARPAT 113:31858
IT **61214-03-7D**, iron complexes
RL: USES (Uses)
(photog. bleach-fixing soln. contg., for fast bleaching)
RN 61214-03-7 CAPLUS
CN Phosphonic acid, [nitrilotris[2,1-ethanediylnitrilobis(methylene)]]hexakis- (9CI) (CA INDEX NAME)



L4 ANSWER 13 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

AB The title compns. contain a polyamino acid of the formula (A1CH2)(A2CH2)NY1N[Y2N(CH2A3)(CH2A4)][Y3N(CH2A5)(CH2A6)] (A1-A6 = CO2M, PO(OM)2; M = H, alkali metal, cation; Y1-Y3 = a divalent org. group). These chelating agents prevent the effects of metal ion contamination, e.g. oxidn. of components and ppt. formation. Thus, Fe3+ and Cu ion were added to a color developer of pH 10.1 contg. NH2OH sulfate and (Na2OCCH)2NCH2CH2N[CH2CH2N(CH2CO2Na)2]2 (I), the developer allowed to stand for 10 days, and then analyzed for NH2OH; the decrease of NH2OH during standing was much lower than for developers not contg. I or contg. other chelating agents. The fog. d. of an image obtained by developing a color paper with the developer was very low. Addn. of Ca+2 and Na+ to the developer and then allowing it to stand for 10 days produced no ppt. I was also effective when used in a phenidone-contg. developer for black-and-white reversal film, or in a fixer, or in a bleaching fixer.

AN 1990:207813 CAPLUS

DN 112:207813

TI Photographic processing compositions

IN Kuze, Satoru

PA Konica Co., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

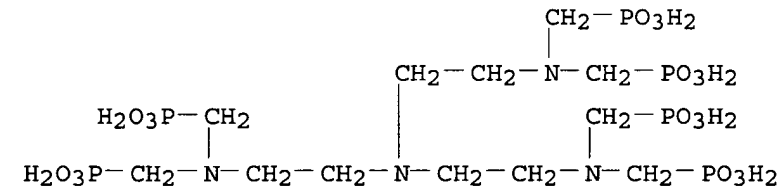
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 01319034	A2	19891225	JP 1988-150513	19880617
JP 2631700	B2	19970716		
PRAI JP 1988-150513		19880617		

OS MARPAT 112:207813

IT **61214-03-7**
RL: USES (Uses)
(photog. developer contg., for suppression of effect of metal ions)

RN 61214-03-7 CAPLUS

CN Phosphonic acid, [nitrilotris[2,1-ethanediylnitrilobis(methylene)]]hexakis- (9CI) (CA INDEX NAME)



L4 ANSWER 14 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

AB Bone marrow-suppressing agents are Sm-153, Gd-159 or Ho-166 complexed with .gtoreq.1 ligand selected from diethylenetriaminepentamethylenephosphonic acid, ethylenediaminetetramethylenephosphonic acid (EDTMP), hydroxyethylenediaminetrimethylenephosphonic acid, nitrilomethylenephosphonic acid or tris(2-aminoethyl)aminehexamethylenepho sphonic acid, or their salts. EDTMP (25-35 mg) in 0.75 mL H2O was treated with 0.25 mL 1.2 .times. 10-3M Sm-153, followed by pH adjustment to 7-8 (HCl) to give a drug compn. injected into rats; rapid uptake of radioactivity in the bones and rapid blood clearance were noted. No clearance of radioactivity from the bones was noted for .gtoreq.72 h.

AN 1989:527027 CAPLUS

DN 111:127027

TI Radionuclide complexes as bone marrow-suppressing agents

IN Kaplan, Donald A.; Goeckeler, William F.

PA Dow Chemical Co., USA

SO Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW

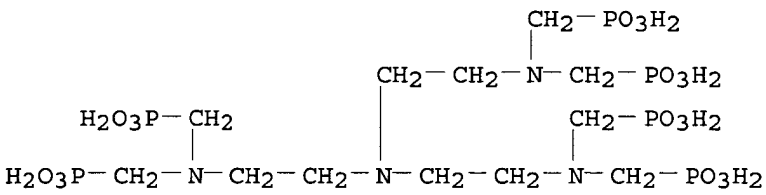
DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 291605	A2	19881123	EP 1987-309644	19871030
	EP 291605	A3	19890726		
	EP 291605	B1	19930331		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	US 4853209	A	19890801	US 1987-114275	19871027
	AU 8780453	A1	19881124	AU 1987-80453	19871029
	AU 603389	B2	19901115		
	IL 84308	A1	19920906	IL 1987-84308	19871029
	CA 1324953	A1	19931207	CA 1987-550546	19871029
	DK 8705706	A	19881119	DK 1987-5706	19871030
	DK 173930	B1	20020225		
	JP 63287729	A2	19881124	JP 1987-273610	19871030
	JP 2536883	B2	19960925		
	ZA 8708169	A	19890726	ZA 1987-8169	19871030
	AT 87488	E	19930415	AT 1987-309644	19871030
PRAI	US 1987-50667	A	19870518		
	EP 1987-309644	A	19871030		

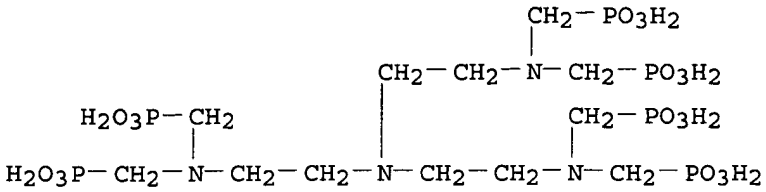
IT **61214-03-7DP**, radionuclide complexes
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as bone marrow-suppressing drugs)
RN 61214-03-7 CAPLUS
CN Phosphonic acid, [nitrilotris[2,1-ethanediylnitrilobis(methylene)]]hexakis- (9CI) (CA INDEX NAME)



L4 ANSWER 15 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN
AB A particle-emitting radionuclide of Y (e.g. 90Y) or In (e.g. 115In) is complexed with a phosphonic acid deriv. of an org. amine for use in treatment of calcific tumors (e.g. metastatic bone cancer) in animals. Ethylenediamine reacted with H3PO3 and HCHO to form ethylenediaminetetramethylenephosphonic acid, which was complexed with 90Y. When this complex was injected into rats, 56% of the dose was taken up by the skeleton.
AN 1987:571614 CAPLUS
DN 107:171614
TI Organic amine phosphonic acid complexes containing yttrium and indium isotopes and their use in the treatment of calcific tumors
IN Simon, Jaime; Volkert, Wynn A.; Wilson, David A.; Troutner, David E.; Goeckeler, William F.
PA Dow Chemical Co., USA
SO Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 225409	A1	19870616	EP 1985-308772	19851202
	R: BE, CH, DE, FR, GB, IT, LI, NL, SE				
PRAI	EP 1985-308772		19851202		

IT **61214-03-7D**, complexes with indium and yttrium radioisotopes
RL: BIOL (Biological study)
(calcific tumor treatment with)
RN 61214-03-7 CAPLUS
CN Phosphonic acid, [nitrilotris[2,1-ethanediylnitrilobis(methylene)]]hexakis- (9CI) (CA INDEX NAME)



L4 ANSWER 16 OF 16 CAPLUS COPYRIGHT 2003 ACS on STN

AB A mixt. of orthophosphorous acid in HCl was treated with 0.1 mole N(CH2CH2NH2)3 and 0.66 mole paraformaldehyde to give N[CH2CH2N(CH2PO3H2)2]3 (I). Similarly prepd. was H2O3PCH2N[CH2CH2N(CH2PO3H2)2]2 (II). I and II were useful as sequesterants for metal ions, as pptn. or scale inhibitors, and as corrosion inhibitors in aq. media.

AN 1976:577612 CAPLUS

DN 85:177612

TI Imino alkylimino phosphonates

IN Mitchell, Robert S.

PA Monsanto Co., USA

SO U.S., 6 pp.
CODEN: USXXAM

DT Patent

LA English

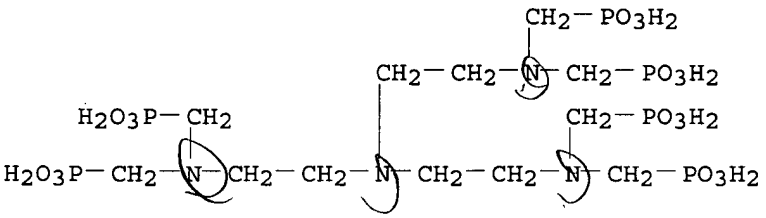
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3974090	A	19760810	US 1975-560078	19750320
	BE 839798	A1	19760920	BE 1976-165363	19760319
	BR 7601672	A	19760921	BR 1976-1672	19760319
	DE 2611813	A1	19760930	DE 1976-2611813	19760319
	FR 2304615	A1	19761015	FR 1976-8082	19760319
	FR 2304615	B1	19821029		
	JP 51125325	A2	19761101	JP 1976-30721	19760319
	JP 60006719	B4	19850220		
	CA 1041115	A1	19781024	CA 1976-248321	19760319
PRAI	US 1975-560078		19750320		

IT **61214-03-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn., sequesterant, scale inhibition, and corrosion inhibition activities of)

RN 61214-03-7 CAPLUS

CN Phosphonic acid, [nitrilotris[2,1-ethanediylnitrilobis(methylene)]]hexakis- (9CI) (CA INDEX NAME)



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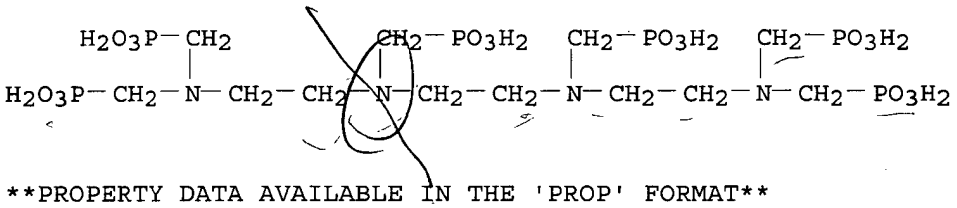
D

L6 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2003 ACS on STN
RN 36475-52-2 REGISTRY
CN Phosphonic acid, [1,2-ethanediylbis[[(phosphonomethyl)imino]-2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Triethylenetetraminehexa(methylenephosphonic acid)
CN **TTHMP**
FS 3D CONCORD
MF C12 H36 N4 O18 P6
CI COM
LC STN Files: BEILSTEIN*, BIOSIS, CA, CAPLUS, CHEMLIST, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

46 REFERENCES IN FILE CA (1937 TO DATE)
16 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
46 REFERENCES IN FILE CAPLUS (1937 TO DATE)

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L30 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2003 ACS on STN

AB The present invention relates to a method of suppressing bone marrow (BM) and treating conditions that arise in or near bone such as cancer, myeloproliferative diseases, autoimmune diseases, infectious diseases, metabolic diseases or genetic diseases, with compns. having as their active ingredient a **radionuclide** complexed with a **chelating** agent such as macrocyclic aminophosphonic acid. Among the examples given are the prepn. and therapeutic application 166Ho-DOTMP in treating cancer.

AN 2000:900493 CAPLUS

DN 134:38949

TI High dose **radionuclide** complexes for bone marrow suppression

IN Abrams, Paul G.; Tatalick, Lauren M.; Thoelke, Kent R.; Bryan, James Kyle; John, Elizabeth K.; Hylarides, Mark D.; Fritzberg, Alan R.

PA Neorx Corporation, USA

SO PCT Int. Appl., 75 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

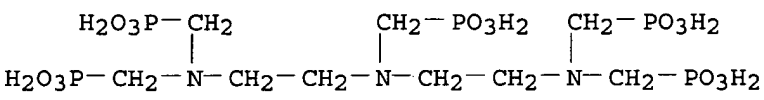
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000076556	A2	20001221	WO 2000-US16052	20000612
	WO 2000076556	A3	20011011		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1191948	A2	20020403	EP 2000-944644	20000612
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2003501488	T2	20030114	JP 2001-502887	20000612
	US 2002176818	A1	20021128	US 2001-14335	20011211
PRAI	US 1999-139065P	P	19990611		
	US 1999-143780P	P	19990713		
	US 1999-149821P	P	19990819		
	WO 2000-US16052	W	20000612		

OS MARPAT 134:38949

IT **15827-60-8D**, DTPMP, complexes with **radionuclides**
36475-52-2D, TTHMP, complexes with **radionuclides**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**radionuclide** complexes for bone marrow suppression)

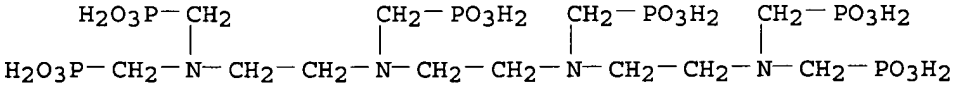
RN 15827-60-8 CAPLUS

CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



RN 36475-52-2 CAPLUS

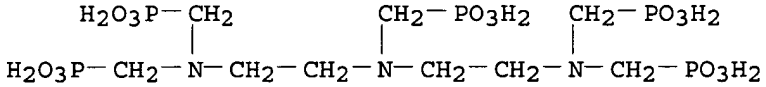
CN Phosphonic acid, [1,2-ethanediylbis[[(phosphonomethyl)imino]-2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



L30 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2003 ACS on STN

AB The aim of this study was to det. the extent of plasma protein binding of six frequently used **radiopharmaceuticals**, namely 99mTc complexes with DTPA (diethylenetriamminepentaacetic acid), MAG-3 (mercaptoacetyltriglycine), DMSA (dimercaptosuccinic acid), MIBI (methoxyisobutylisonitrile), MDP (methylenediphosphonate), and DTPMP (diethylenetriammine pentamethylene phosphonic acid). The binding of some **chelates** under study (99mTc-DTPA and 99mTc-DTPMP) to human plasma was negligible, but the protein binding of the others was significant. The binding of 99mTc-DTPA, 99mTc-MIBI, 99mTc-MDP and 99mTc-DTPMP to plasma proteins (>0.95, 0.85, 0.64, and >0.95 free fraction, resp.) should exhibit only insignificant effect to their overall pharmacokinetics. On the other hand, protein binding of 99mTc-MAG-3 and 99mTc-DMSA (0.11 and 0.14 free fraction, resp.) should be considered as an important factor which could effect their distribution and elimination characteristics. Anionic agents such as 99mTc-MAG-3, 99mTc-DMSA, and 99mTc-MDP, are attracted predominantly by albumin which possesses a net cationic charge. Some drugs exhibit significant binding to other plasma proteins as well. For example, cationic drugs are attracted by .alpha.1-acid glycoprotein which has an anionic charge. As 99mTc-MIBI is a monocationic complex, its binding to .alpha.1-acid glycoprotein could be expected.

AN 1999:758292 CAPLUS
DN 132:191255
TI Protein binding of some 99mTc-**radiopharmaceuticals**
AU Laznickova, Alice; Laznicek, Milan
CS Fac. of Pharm., Charles Univ., Hradec Kralove, CZ-50005, Czech Rep.
SO Farmacevtski Vestnik (Ljubljana) (1999), 50(Pos. Stev.), 336-337
CODEN: FMVTAV; ISSN: 0014-8229
PB Slovensko Farmacevtsko Drustvo
DT Journal
LA English
IT **15827-60-8D**, technetium-99 complex
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(protein binding of some 99mTc-**radiopharmaceuticals**)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)

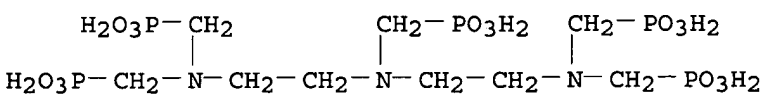


L30 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2003 ACS on STN

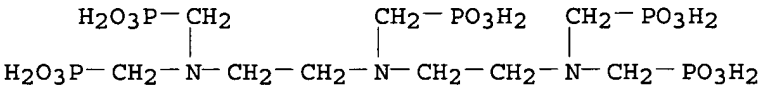
AB The effectiveness of a series of diphosphonates in the elimination of **radionuclides** from rat was analyzed by means of topol. structure and activity relations. It is possible to compute some nos. or indexes characteristic of the topol. structure of a mol. The Wiener Index which measures the ramification of a mol. has been chosen. An attempt was made to correlate the effectiveness of the mols. tested in removing plutonium from the organism to their Wiener Index. Only unprotected mols., i.e., in free acidic form fitted the correlation. LICAM (C) and DTPA were used as ref. mols. to control these results. The fact that LICAM (C) well fitted the relation and that DTPA did not are discussed, as are some general requirements for a new mol. to be effective.

AN 1997:407594 CAPLUS
DN 127:62584
TI Topological structure activity analysis of diphosphonates in the elimination of **radionuclides** from body
AU Cazoulat, A.; Gerasimo, P.; Burgada, R.; Bailly, T.
CS Laboratoire de controle radiotoxicologique, Service de protection Radiologique des Armees, Clamart, F 92141, Fr.
SO Annales Pharmaceutiques Francaises (1997), 55(3), 125-134
CODEN: APFRAD; ISSN: 0003-4509
PB Masson
DT Journal
LA English

IT **15827-60-8**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(topol. structure activity anal. of diphosphonates in **radionuclides** elimination from body)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



L30 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2003 ACS on STN
AB Sorbents with conformationally mobile aminomethylphosphonic groups were synthesized and their Cu(II) complexes were characterized by ESR. The sorption properties of these resins toward a no. of **radionuclides** are compared with those of sorbents contg. conformationally mobile aminocarboxyl functional groups.
AN 1992:136918 CAPLUS
DN 116:136918
TI Sorbents with conformationally mobile aminomethylphosphonic groups
AU Tsizin, G. I.; Formanovskii, A. A.; Mikhura, I. V.; Nekrasova, N. N.; Kolotov, V. P.; Sokolov, D. P.; Evtikova, G. A.; Makarov, I. N.; Zolotov, Yu. A.
CS Inst. Geokhim. Anal-Khim. im. Vernadskogo, Moscow, USSR
SO Zhurnal Neorganicheskoi Khimii (1991), 36(12), 3142-5
CODEN: ZNOKAQ; ISSN: 0044-457X
DT Journal
LA Russian
IT **15827-60-8D**, reaction products with polystirene
RL: PROC (Process)
(ESR study of)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)

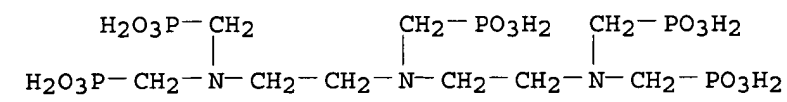


L30 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2003 ACS on STN
AB Hematol. malignancy in an animal is treated by using a polyvalent particle-emitting **radionuclide** (153Sm, 89Sr, 90Y, etc.) to label a bone-localizing **chelating** agent (EDTMP, HEDP, etc.) and administering this agent to affect the bone marrow, but in a dosage close to but less than a level which will cause complete bone marrow ablation, and administering a cytotoxic pharmaceutical (e.g. melphalan or a deriv. or analog thereof) in a dose sufficient to affect bone marrow, but also in a dose close to but less than a level which will cause complete bone marrow ablation. In rats receiving endoradiotherapy with 153Sm-EDTMP (555 mBq/kg) followed 5 days later by 9.5 mg melphalan/kg and marrow transplantation on day 6, the survival rate was >90%. Controls not receiving transplantation had a survival rate of .apprx.20%. Other expts. showed that marrow transplantation needs to be delayed until the effects of the endoradiotherapy have diminished.
AN 1992:54748 CAPLUS
DN 116:54748
TI Bone-specific **chelating** agent-**radionuclide** complex and cytotoxic agent for bone marrow treatment in hematological malignancy
IN Turner, Harvey J.; Claringbold, Phillip G.
PA Australian Nuclear Science and Technology Organisation, Australia

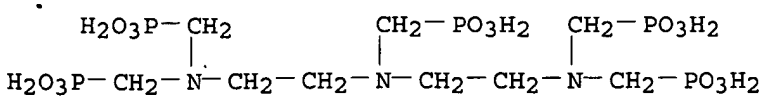
SO PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9116075	A1	19911031	WO 1991-AU155	19910419
W: AT, AU, BB, BG, BR, CA, CH, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MC, MG, MW, NL, NO, RO, SD, SE, SU, US				
RW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, DK, ES, FR, GA, GB, GR, IT, LU, ML, MR, NL, SE, SN, TD, TG				
AU 9177571	A1	19911111	AU 1991-77571	19910419
AU 640784	B2	19930902		
PRAI AU 1990-9726		19900420		
WO 1991-AU155		19910419		

IT **15827-60-8D**, Diethylenetriaminepentamethylenephosphonic acid, **radionuclide** complexes
RL: BIOL (Biological study)
(and cytotoxic agent in bone marrow ablation prior to transplant for hematol. neoplasm treatment)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



L30 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2003 ACS on STN
AB A series of stable complexes of 153Sm has been produced using multidentate acetate and phosphonate ligands. Biodistribution studies in unanesthetized rats showed varying degrees of bone and soft-tissue uptake for these complexes. Of the complexes studied, 153Sm-ethylenediaminetetramethylenephosphonate (EDTMP) showed the best combination of high bone uptake, low nonosseous uptake, and rapid blood clearance which warranted its further investigation in rabbits, was found to be more rapid than 99mTc methylenediphosphonate (MDP). Scintigraphic images were virtually indistinguishable from 99mTc MDP images. Lesion/normal bone ratios were detd. from digitized images obtained using a drill hole model and found to be .apprx.17:1. Based on these excellent biodistribution characteristics, 153Sm-EDTMP could be therapeutically useful in treating metastatic bone cancer.
AN 1990:174873 CAPLUS
Correction of: 1988:146290
DN 112:174873
Correction of: 108:146290
TI Skeletal localization of samarium-153 **chelates**: potential therapeutic bone agents
AU Goeckeler, W. F.; Edwards, B.; Volkert, W. A.; Holmes, R. A.; Simon, J.; Wilson, D.
CS Dep. Chem. Radiol., Univ. Missouri, Columbia, MO, USA
SO Journal of Nuclear Medicine (1987), 28(4), 495-504
CODEN: JNMEAQ; ISSN: 0161-5505
DT Journal
LA English
IT **15827-60-8DP**, samarium-153 complexes
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and metab. and biodistribution of, **radioterapy** of bone cancer in relation to)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



L30 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2003 ACS on STN

AB The dissocn. consts. of DTPA, diethylenetriaminepentamethylenephosphonic, diethylenetriamine-N''-hexyl-N', N'''-tetramethylenephosphonic, diethylenetriamine-N''-octyl-N',N'''-tetramethylenephosphonic, diethylenetriaminetrimethylenephosphonic-N',N'''-diacetic, glycyl-N-benzylleucylaminemethylphosphonic, and 4-amino-4-phosphobutyric acids and stability consts. of their complexes with Eu(III), Sn(III), Ce(III), and Ca(II) were detd. pH-metrically. The stability consts. of the Eu, Sm, and Ce complexes with the DTPA phosphonic acid analogs were lower than those of the corresponding DTPA complexes. This suggests that the DTPA phosphonic acid analogs are less suitable for removal of lanthanides (and probably of transuranium elements) from living organisms that DTPA itself.

AN 1988:412786 CAPLUS

DN 109:12786

TI Stability constants of europium, samarium, cerium, and calcium complexes with some phosphonic derivatives of diethylenetriaminepentaacetic acid

AU Zakrzewski, Andrzej; Geisler, Jan

CS Zakl. Ochr. Promien., Inst. Energ. Atom., Otwock-Swierk, 05-400, Pol.

SO Chemia Analityczna (Warsaw, Poland) (1987), 32(1-2), 151-8
CODEN: CANWAJ; ISSN: 0009-2223

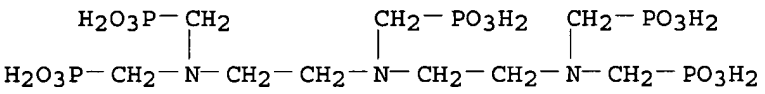
DT Journal

LA Polish

IT **15827-60-8DP**, Diethylenetriaminepentamethylenephosphonic acid, rare earth complexes
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of)

RN 15827-60-8 CAPLUS

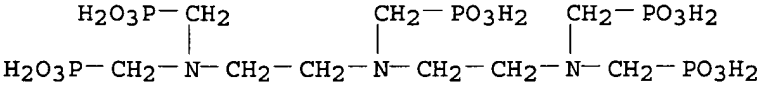
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



IT **15827-60-8**, Diethylenetriaminepentamethylenephosphonic acid
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(ionization of)

RN 15827-60-8 CAPLUS

CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)

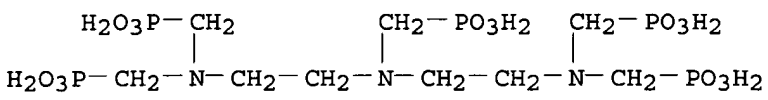


L30 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2003 ACS on STN

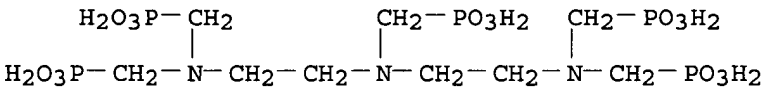
AB A series of stable complexes of 153Sm has been produced using multidentate acetate and phosphonate ligands. Biodistribution studies in unanesthetized rats showed varying degrees of bone and soft-tissue uptake for these complexes. Of the complexes studied, 153Sm-ethylenediaminetetramethylenephosphonate (EDTMP) showed the best combination of high bone uptake, low nonosseous uptake, and rapid blood clearance which warranted its further investigation in rabbits, was found to be more rapid than 99mTc methylenediphosphonate (MDP). Scintigraphic images were virtually indistinguishable from 99mTc MDP images. Lesion/normal bone ratios was detd. from digitized images obtained using a drill hole model and found to be .apprx.17:1. Based on these excellent

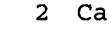
biodistribution characteristics, 153Sm-EDTMP could be therapeutically useful in treating metastatic bone cancer.

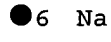
AN 1988:146290 CAPLUS
DN 108:146290
TI Skeletal localization of samarium-153 **chelates**: potential therapeutic bone agents
AU Goeckeler, W. F.; Edwards, B.; Volkert, W. A.; Holmes, R. A.; Simon, J.; Wilson, D.
CS Dep. Chem. Radiol., Univ. Missouri, Columbia, MO, USA
SO Journal of Nuclear Medicine (1987), 28(4), 495-504
CODEN: JNMEAQ; ISSN: 0022-3123
DT Journal
LA English
IT **15827-60-8DP**, samarium-153 complexes
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and metab. and biodistribution of, **radiotherapy** of bone cancer in relation to)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



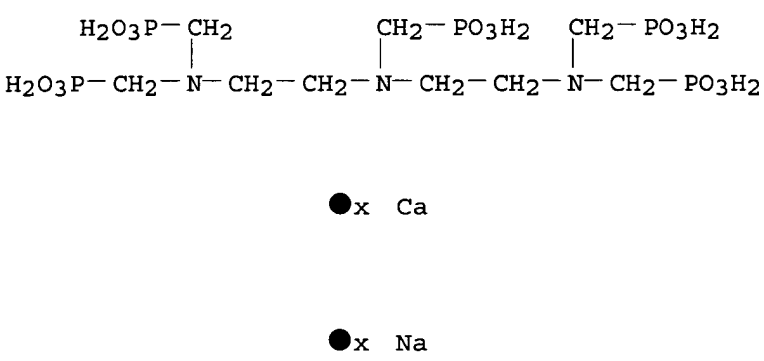
L30 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2003 ACS on STN
AB The decorporation of 110mAgg, 60Co, and 58Co from organs of white rats by various chem. agents was investigated. The most effective agents for 110mAg decorporation were thiols, penacillamine, and diene, whereas for **radiocobalt**, DTPA and related compds. were most effective. Ferrocene was quite efficient in **radiocobalt** desorption from the digestive tract. The effectiveness of the tested compds. depended in part on the form in which the nuclides were administered.
AN 1988:127678 CAPLUS
DN 108:127678
TI Effect of some chemical agents on the level of accumulation of **radioactive** silver and cobalt in the body of rats
AU Ivannikov, A. T.; Tikhonova, L. I.; Borisov, V. P.; Popov, B. A.; Razumovskii, N. O.
CS USSR
SO Rep. Staatl. Amtes Atomsicherh. Strahlenschutz DDR (1986), SAAS-343, 45-52
CODEN: RSADDL; ISSN: 0138-2551
DT Report
LA Russian
IT **69490-26-2**
RL: BIOL (Biological study)
(cobalt **radioisotopes** and silver-110m decorporation by)
RN 69490-26-2 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis-, calcium sodium salt (1:2:6) (9CI) (CA INDEX NAME)







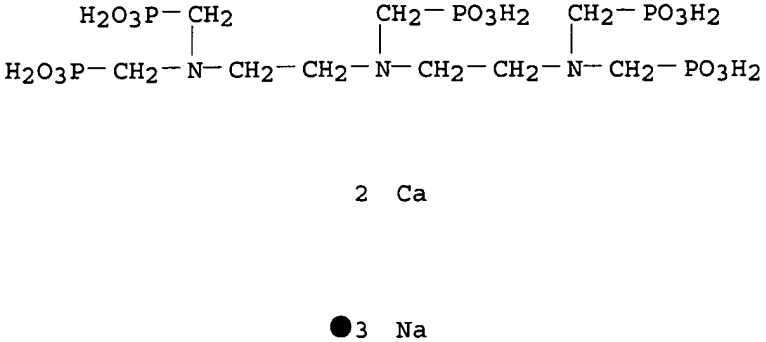
L30 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2003 ACS on STN
AB Decorporation rates of the title **radionuclides** were studied in mice and rats (after inhalation of compds. with high or low soly.) by lung lavage with Eagle's medium without or with complexing agents (DTPA or Trimephazin), by inhalation of aerosols of the lavage fluids, or by i.p. injection of Ca+/Na3-DTPP-contg. liposomes. Mechanisms of the decorporations are discussed.
AN 1987:210143 CAPLUS
DN 106:210143
TI Decorporation of europium-154 trichloride or cobalt-57 dichloride and assessment of lung irrigation by promethium-147 and cerium-144 trichloride
AU Hoelzer, F.; Laussmann, D.; Jaeger, E.
CS Ger. Dem. Rep.
SO Rep. Staatl. Amtes Atomsicherh. Strahlenschutz DDR (1986), SAAS-345, 86-109
CODEN: RSADDL; ISSN: 0138-2551
DT Report
LA German
IT **52871-36-0**
RL: BIOL (Biological study)
(**radioelements** decorporation by)
RN 52871-36-0 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis-, calcium sodium salt (9CI) (CA INDEX NAME)



●x Ca

●x Na

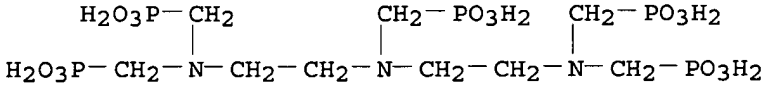
L30 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2003 ACS on STN
AB Rats contaminated i.v. with 144Ce or 152+154Eu were injected i.p. with Na3Ca2H3-DTPP. Four days later, the **radioactivity** was estd. in the whole body, liver, kidneys, and femur of the rats. Retention of the **radionuclides** in rats treated with the DTPP **chelate** was .apprx.25-40% lower than that in nontreated controls. Delay of treatment by 24 h resulted in considerably less pronounced effects. Na3Ca2-DTPP was found to be less effective than DTPA in reducing retention of Ce and Eu both in the whole body and in the organs of rats.
AN 1986:457054 CAPLUS
DN 105:57054
TI Effects of diethylenetriaminepentamethylenephosphonate (DTPP) on the retention of **radioactive** cerium and europium in rats
AU Szot, Z.; Rochalska, M.; Geisler, J.; Dabrowska, J.
CS Inst. Nucl. Chem. Technol., Warsaw, 03-195, Pol.
SO Nukleonika (1985), 30(1-2), 17-30
CODEN: NUKLAS; ISSN: 0029-5922
DT Journal
LA English
IT **37131-17-2**
RL: BIOL (Biological study)
(cerium-144 and europium isotopes decorporation by)
RN 37131-17-2 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis-, calcium sodium salt (1:2:3) (9CI) (CA INDEX NAME)



L30 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2003 ACS on STN
AB **Chelated radiolabeled** polysaccharides, useful for diagnosing formed and forming blood clots in the vascular system, comprise a water sol. polysaccharide having an av. of .gtoreq.0.25 anionic groups/monosaccharide unit, a **chelator** such as amino acids, cyclic anhydrides, or CS2. The intermediate compd. is then treated with a **radio** tracer. Na heparin was converted to heparin pyridinium salt [37314-44-6], desulfated, and treated with DTPA to give a heparin-DTPA coupled compd. This was treated with 111InCl3 to give a complex which was stable in contact with plasma proteins. In rats there was significant accumulation of this 111In-heparin compd. in thrombosed artery compared to nonthrombosed artery.
AN 1982:568966 CAPLUS
DN 97:168966
TI Diagnostic **radiolabeled** polysaccharide derivatives
IN Milbrath, Dean S.; Ferber, Richard H.; Barnett, William E.
PA Minnesota Mining and Mfg. Co. , USA
SO Eur. Pat. Appl., 38 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 55028	A1	19820630	EP 1981-305513	19811123
	EP 55028	B1	19860219		
	R: CH, DE, FR, GB, IT, SE				
	US 4385046	A	19830524	US 1980-216685	19801215
	CA 1177072	A1	19841030	CA 1981-391590	19811207
	AU 8178489	A1	19820624	AU 1981-78489	19811214
	AU 547905	B2	19851114		
	JP 57125201	A2	19820804	JP 1981-201430	19811214
PRAI	US 1980-216685		19801215		

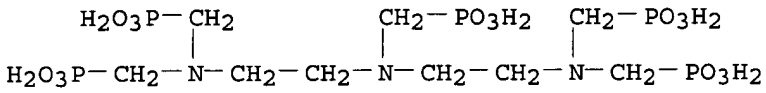
IT **15827-60-8DP**, reaction products with desulfated polysaccharides and indium-111 or technetium-99m
RL: PREP (Preparation)
(prepn. of, for diagnosis of blood clots in vascular system)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



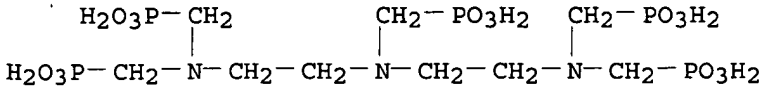
L30 ANSWER 13 OF 14 CAPLUS COPYRIGHT 2003 ACS on STN
AB Expts. on rats and dogs were performed in which UO22+ in aq. soln. was injected i.p. or i.v. and its content detd. after 5 days in the skeleton and kidney. The **chelate** formation of UO22+ with 6 phosphonic

acid compds. was followed by detg. the UO2+ remaining by electrophoresis and spectrometry. All of these 6 compds. significantly reduced nuclide content in skeleton and kidney in comparison with controls. The effects of diethylenetriaminepentamethylene phosphonic acid (DTPF) and diethylenetriaminepentaacetic acid (DTPA) were studied on the **radionuclide** content in the femur and liver 3 days after sep. injections of 91Y, 144Ce, 106Ru, 95Zr, 95Nb and 45Ca. The stability of complexes formed with 106Ru, 95Zr and 95Nb was compared against that for 91Y and 144Ce. It appeared as if aminealkylphosphonic acids, as a multicharged anion, formed the most stable **chelated** compds. with multivalent metallic cations as Zr4+ and Nb5+.

AN 1974:45278 CAPLUS
DN 80:45278
TI Polyaminepolyalkylphosphonic acids as effective ligands for binding and eliminating uranium and its fission products from the body
AU Balabukha, V. S.; Ivannikov, A. T.; Razbitnaya, L. I.; Razumovskii, N. O.; Tikhonova, L. I.; Baranovskaya, L. M.
CS Inst. Biophys., Minist. Public Health, Moscow, USSR
SO Health Phys. Probl. Intern. Contam., Proc. IRPA (Int. Radiat. Prot. Ass.) Eur. Congr. Radiat. Prot., 2nd (1973), Meeting Date 1972, 293-8. Editor(s): Bujdoso, E. Publisher: Akad. Kiado, Budapest, Hung.
CODEN: 27FKAY
DT Conference
LA English
IT **15827-60-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(**chelation** by, of **radioelements**, metab. in relation to)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



L30 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2003 ACS on STN
AB The efficiency of i.p. administered ethylenediaminetetramethylphosphinic acid, diethylenetriaminepentamethylphosphinic acid, .beta.,.beta.'-diaminodiethyl ether tetramethylphosphinic acid, and ethylenediaminediaceticdimethylphosphinic acid for the removal of 91Y and 144Ce from rats was compared with that of EDTA, diethylenetriaminepentaacetic acid, and .beta.,.beta.'-diaminodiethyl ether tetraacetic acid. Complexons and their phosphinic analogs were administered to white male rats in nontoxic doses (50-160 mg./animal) simultaneously or 30 min. and 1 hr. before i.p. injection of **radioisotope** (0.1 .mu.c./g.). Animals were decapitated 3 days later and the **radioactivity** was detd. in the bones, liver, kidneys, and spleen. Partial substitution of phosphinic for carboxyl in the complexon mol. increased, but the complete substitution decreased, the efficiency of **radioisotope** removal.
AN 1967:440814 CAPLUS
DN 67:40814
TI Efficiency of complexon phosphinic analogs for removal of yttrium-91 and cerium-144 from rat organism
AU Torchinskaya, O. L.; Razumovskii, N. O.; Mironova, E. A.
SO Raspred. Biol. Deistvie Radioakt. Izot. (1966), 488-94
CODEN: 16KLAA
DT Conference
LA Russian
IT **15827-60-8**
RL: BIOL (Biological study)
(cerium-144 and yttrium-91 metabolism by organs in response to)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



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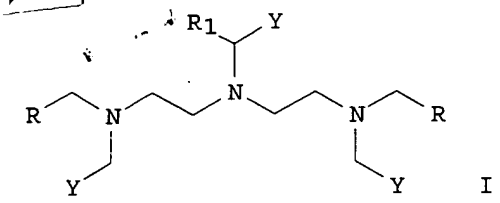


I

AB The prepn. of diethylenetriamine derivs. (I; Y = COOH or PO(OH)2 with at least one Y = PO(OH)2) able to **chelate** bi- and trivalent paramagnetic metal ions, their **chelated** complexes with said metal ions and the physiol. compatible salts is described. The use of these complexes as contrast agents for Magnetic **Resonance** Imaging (**MRI**) is claimed. Thus, Na3[Gd{O3PCH2N{CH2CH2N(CH2COO)2}2}] and related gadolinium complexes were prepd.

AN 2001:472732 CAPLUS

DN 135:70119

TI Preparation of (phosphonomethyl)diethylenetriamine derivative **chelating** compounds and their complexes with paramagnetic metals for use as **MRI** contrast agents.

IN Franzini, Maurizio; Beltrami, Andrea; Calabi, Luisella; Maiocchi, Alessandro; Virtuani, Mario; Anelli, Pier Lucio; Ramalingam, Kondareddiar; Ranganathan, Ramachandran S.

PA Bracco S.P.A., Italy

SO PCT Int. Appl., 72 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

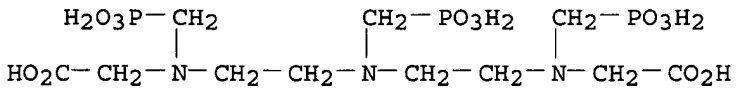
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001046207	A1	20010628	WO 2000-EP12977	20001220
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	IT 1315263	B1	20030203	IT 1999-MI2656	19991221
	EP 1155023	A1	20011121	EP 2000-990800	20001220
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2003518131	T2	20030603	JP 2001-547116	20001220
	US 2003013859	A1	20030116	US 2001-913711	20010924
	US 6509324	B2	20030121		
PRAI	IT 1999-MI2656	A	19991221		
	WO 2000-EP12977	W	20001220		

OS CASREACT 135:70119; MARPAT 135:70119

IT **52820-08-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. as **chelating** ligand for complexation with paramagnetic metals for use as **MRI** contrast agents)

RN 52820-08-3 CAPLUS

CN Glycine, N,N'-[[(phosphonomethyl)imino]di-2,1-ethanediyl]bis[N-(phosphonomethyl)- (9CI) (CA INDEX NAME)



RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

AB Methods and compns. are provided for improved medical diagnostic imaging and therapy for the treatment of rheumatoid arthritis. The compns. are derived from apatite particles including, but not limited to, hydroxyapatite, fluoroapatite, iodoapatite, carbonate-apatite, and mixts. and derivs. thereof. The compns. of the invention contain a paramagnetic species incorporated into the apatite particles to improve magnetic **resonance** contrast and a radionuclide capable of providing a therapeutic dose of radioactivity. Also disclosed is a combination diagnostic/therapeutic compn. and methods fo performing medical diagnostic and therapeutic procedures which involve administering to a warm-blooded animal an amt. of the above-described apatite particles contg. a diagnostically effective amt. of the paramagnetic ion and a therapeutically effective amt. of the radionuclide and then performing the medical treatment and diagnostic procedures. The radionuclide may be bound to the apatite by a **chelating** group, e.g. citrate.

AN 1997:181129 CAPLUS

DN 126:168545

TI Radiolabeled apatite particles containing a paramagnetic ion for diagnostic imaging and therapy for rheumatoid arthritis, and preparation of doped and modified apatites

IN Brodack, James W.; Deutsch, Edward A.; Deutsch, Karen E.

PA Mallinckrodt Medical, Inc., USA

SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9701304	A1	19970116	WO 1996-US10808	19960625

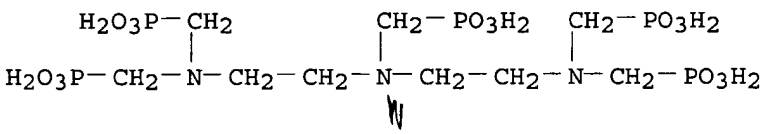
W: CA, JP
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRAI US 1995-496645 19950629

IT **15827-60-8**, Diethylenetriamine-penta(methylenephosphonic acid)
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; radiolabeled apatite particles contg. a paramagnetic ion for diagnostic imaging and therapy for rheumatoid arthritis, and prepn. of doped and modified apatites)

RN 15827-60-8 CAPLUS

CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



L23 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

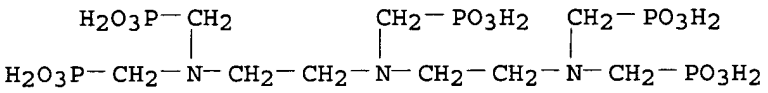
AB Treated calcium/oxyanion-contg. particles are disclosed for enhancing medical diagnostic imaging such as magnetic **resonance** spectroscopy, magnetic **resonance** spectroscopy imaging, x-ray diagnostic imaging, and ultrasound imaging. Novel coating and manufg. technique are disclosed to control particle size and particle aggregation, resulting in compns. for organ specific imaging of the liver, spleen, or tissue disease. Depending on the diagnostic imaging technique, calcium/oxyanion-contg. particles are treated to be paramagnetic, radiopaque, or echogenic. Also disclosed are diagnostic compns. and methods of performing medical diagnostic procedures which involve administering to a warm-blooded animal a diagnostically effective amt. of the above-described particles and then performing the medical diagnostic procedure. Prepn. of e.g. hydroxylapatite doped with 10% Mn(II) and modified by surface-adsorbed Mn(II) and HEDP addn., which enhanced **MRI** of the liver, is described.

AN 1995:264707 CAPLUS

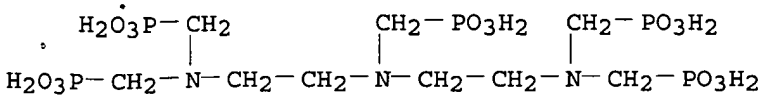
DN 122:26894
TI Treated calcium/oxyanion-containing particles for medical diagnostic imaging
IN Deutsch, Edward A.; Deutsch, Karen F.; Nosco, Dennis L.; Ralston, William H.; White, David H.; Wilking, Janet B.; Wolfangel, Robert G.; Woulfe, Steven R.
PA Mallinckrodt Medical, Inc., USA
SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9423649	A1	19941027	WO 1994-US4015	19940412
	W: AU, BR, CA, CZ, FI, HU, JP, KR, NO, PL, SK				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2159799	AA	19941027	CA 1994-2159799	19940402
	AU 9466321	A1	19941108	AU 1994-66321	19940412
	EP 693904	A1	19960131	EP 1994-914132	19940412
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, NL, PT, SE				
	JP 08509217	T2	19961001	JP 1994-523397	19940412
PRAI	US 1993-47129		19930413		
	WO 1994-US4015		19940412		

IT **15827-60-8**, Diethylenetriaminepenta(methylenephosphonic acid)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(treated calcium/oxyanion-contg. particles for medical diagnostic imaging)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



L23 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN
AB R(NCH2PO3H2)2 (R = (CH2)2, (CH2)4, m-C6H4(CH2)2) were prepd. Gd(III) complexes of the ligands with R = (CH2)2 and m-C6H4(CH2)2 as well as one with R = H2O3PCH2N(CH2)2 were studied as potential contrast agents for NMR imaging. H2O 1H relaxation at 10 and 200 MHz were detd. and luminescence measurements, on TbIII complexes, allowed the detn. of the no. of coordinated H2O mols. The complexes bind strongly to hydroxyapatite, suggesting possible targetting to bone in vivo. This was confirmed by 153Gd tracer studies with the most favorable biodistribution in rats being shown by the Gd(III) ethylenediamine-N,N,N',N'-tetrakis(methylenephosphonate).
AN 1994:568980 CAPLUS
DN 121:168980
TI Synthesis, characterization and comparative study of aminophosphonate **chelates** of gadolinium(III) ions as magnetic **resonance** imaging contrast agents
AU Bligh, S. W. Annie; Harding, Charles T.; McEwen, Andrew B.; Sadler, Peter J.; Kelly, J. Duncan; Marriott, Janet A.
CS Dep. Chem., Univ. London, London, WC1H 0PP, UK
SO Polyhedron (1994), 13(12), 1937-43
CODEN: PLYHDE; ISSN: 0277-5387
DT Journal
LA English
IT **15827-60-8**
RL: RCT (Reactant); RACT (Reactant or reagent)
(binding to hydroxyapatite and reaction of, with gadolinium oxide)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



L23 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN

AB Treated apatite particles are disclosed for enhanced medical diagnostic imaging, e.g. **MRI**, X-ray imaging, or ultrasound imaging. Novel coating and manufg. techniques are disclosed to control particle size and particle aggregation, resulting in a compn. for organ-specific imaging of the liver, spleen, gastrointestinal tract, or tissue disease states. Depending on the diagnostic imaging technique, apatite particles are treated to be paramagnetic, radiopaque, or echogenic. The apatite particles may also be fluorinated to form stable fluoroapatite compns. useful for 19F imaging. Also disclosed are diagnostic compns. and methods of performing medical diagnostic procedures which involve administering to a warm-blooded animal a diagnostically effective amt. of the above-described apatite particles and then performing the medical diagnostic procedure. Prepn. of a variety of apatite particles is described. Thus, hydroxylapatite particles doped with Mn were prepd. and further treated with hydroxyethyl diphosphonate. The resulting particles had an av. diam. of 258 nm and a relaxivity of 3.05 mM-1sec-1. In **MRI** studies, a 45% enhancement of the liver was obsd. 4 h post-injection at a dose of 10 .mu.mol Mn/kg body wt.

AN 1993:534569 CAPLUS

DN 119:134569

TI Treated apatite particles for medical diagnostic imaging

IN Deutsch, Edward A.; Deutsch, Karen F.; Cacheris, William P.; Ralston, William P.; White, David H.; Woulfe, Steven R.

PA Mallinckrodt Medical, Inc., USA

SO PCT Int. Appl., 50 pp.
CODEN: PIXXD2

DT Patent

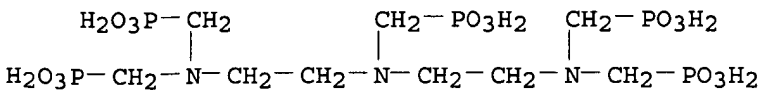
LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9307905	A2	19930429	WO 1992-US9032	19921021
	WO 9307905	A3	19930805		
	W: AU, CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE				
	AU 9228864	A1	19930521	AU 1992-28864	19921021
	AU 674291	B2	19961219		
	EP 610333	A1	19940817	EP 1992-922461	19921021
	EP 610333	B1	20010103		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, SE				
	JP 07500823	T2	19950126	JP 1992-507914	19921021
	AT 198423	E	20010115	AT 1992-922461	19921021
	ES 2152932	T3	20010216	ES 1992-922461	19921021
	CA 2187749	AA	19951019	CA 1994-2187749	19940411
	WO 9527437	A1	19951019	WO 1994-US3276	19940411
	W: AU, BR, CA, CZ, FI, HU, JP, KR, NO, PL, SK				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9467664	A1	19951030	AU 1994-67664	19940411
	EP 755222	A1	19970129	EP 1994-915769	19940411
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 09511520	T2	19971118	JP 1994-526296	19940411
	US 5468465	A	19951121	US 1994-271921	19940706
	AU 9670345	A1	19970123	AU 1996-70345	19961022
	AU 686523	B2	19980205		
PRAI	US 1991-784325	A	19911022		
	US 1992-948540	A	19920922		
	WO 1992-US9032	A	19921021		
	WO 1994-US3276	W	19940411		

IT **15827-60-8**
RL: BIOL (Biological study)
(treated apatite particle coated with, paramagnetic cation

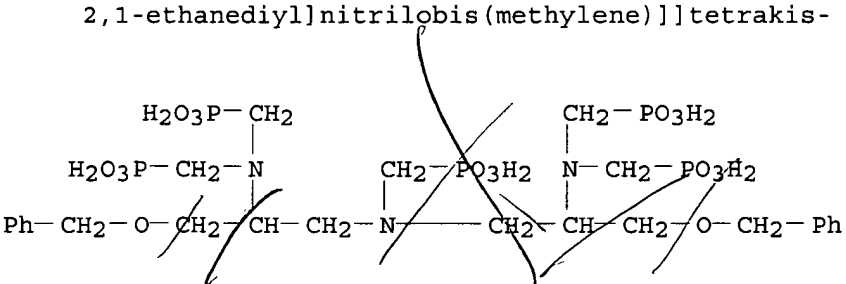
chelation with, for **MRI**)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



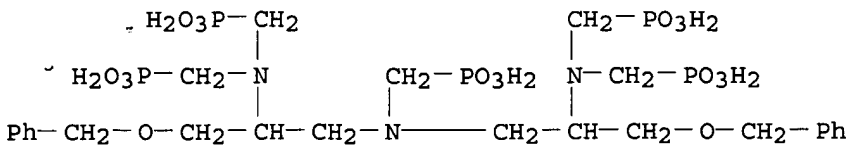
L23 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN
AB **Chelating** agents, particularly useful in prepn. of diagnostic and therapeutic agents for magnetic **resonance** imaging, scintigraphy, ultrasound imaging, radiotherapy, and heavy-metal detoxification, are compds. of the formula XCHR1NZ(CHR1)nA(CHR1)mNZCHR1X, where each of the groups Z is a group CHR1X or the groups Z together are a group (CHR1)qA'(CHR1)r, where A' is an O or S atom or a group NY; m, n, q, and r are each 2, 3 or 4, preferably 2; and the groups A, X, Y and R1 are defined in the claims.
AN 1991:463437 CAPLUS
DN 115:63437
TI **Chelating** agent derivatives
IN Almen, Torsten; Berg, Arne; Klaveness, Jo; Rongved, Paal
PA Cockbain, Julian Roderick Michaelson, UK; Nycomed A/S
SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9008134	A1	19900726	WO 1990-EP78	19900115
	W: AU, CA, FI, GB, JP, NO, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE				
	AU 9050446	A1	19900813	AU 1990-50446	19900115
	EP 453507	A1	19911030	EP 1990-902777	19900115
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE				
	JP 04502919	T2	19920528	JP 1990-502948	19900115
	NO 9102755	A	19910912	NO 1991-2755	19910712
PRAI	GB 1989-732		19890113		
	WO 1990-EP78		19900115		

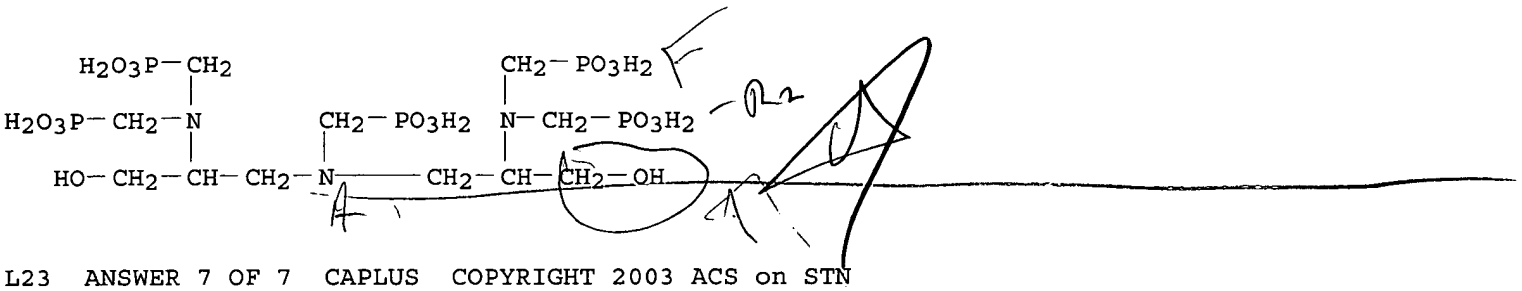
OS MARPAT 115:63437
IT **135043-76-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of, in **chelating** agent prepn.)
RN 135043-76-4 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[[1-[(phenylmethoxy)methyl]-2,1-ethanediyl]nitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



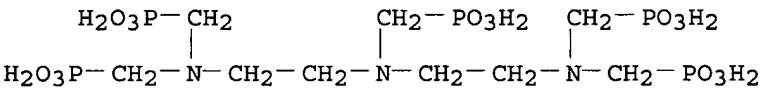
IT **135043-76-4DP**, complexes with gadolinium
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 135043-76-4 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[[1-[(phenylmethoxy)methyl]-2,1-ethanediyl]nitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



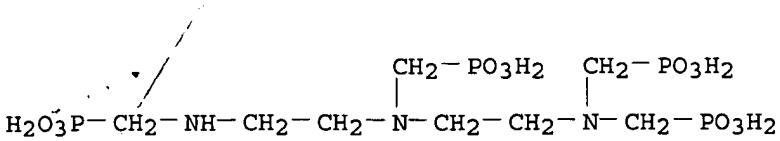
IT **135007-86-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, for **chelating** agent)
RN 135007-86-2 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[[1-(hydroxymethyl)-2,1-ethanediyl]nitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



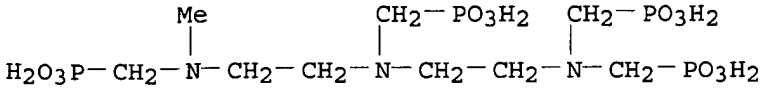
L23 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN
AB A method was developed for calcn. of the compn. of a product obtained in the synthesis of diethylenetriaminepentamethylphosphonic acid (DTPPA) by reaction between diethylenetriamine, formaldehyde, and phosphorus acid in hydrochloric acid medium. Exptl. anal. data were obtained by complexometric and potentiometric titrn. processed by successive approxn. predicting the presence of incomplete phosphonylation and N-methylation products in DTPPA samples. 1H and 31P NMR studies have confirmed that the DTPPA samples are complex mixts. consisting of at least five substances. A method is proposed for detg. relative concns. of each component from the NMR spectra in 12M NaOD.
AN 1989:107361 CAPLUS
DN 110:107361
TI Use of a mathematical model for the analysis of mixtures of substances, similar in structure and properties, taking diethylenetriaminepentamethylphosphonic acid as example
AU Gvozdetskii, A. N.; Babushkina, T. A.; Mizrakh, L. I.; Sukhoruchkin, A. G.; Vasil'ev, A. M.
CS Inst. Biophys., Moscow, USSR
SO Zhurnal Analiticheskoi Khimii (1988), 43(5), 851-8
CODEN: ZAKHA8; ISSN: 0044-4502
DT Journal
LA Russian
IT **15827-60-8**
RL: ANST (Analytical study)
(detn. of byproducts and, in reaction mixt., math. model and NMR and titrimetry for)
RN 15827-60-8 CAPLUS
CN Phosphonic acid, [[(phosphonomethyl)imino]bis[2,1-ethanediylnitrilobis(methylene)]]tetrakis- (9CI) (CA INDEX NAME)



IT **119165-61-6 119165-63-8**
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, in diethylenetriaminepentamethylphosphonic acid synthesis products, phosphorus-31 NMR spectrometric)
RN 119165-61-6 CAPLUS
CN Phosphonic acid, [[[2-[(phosphonomethyl)[2-[(phosphonomethyl)amino]ethyl]amino]ethyl]imino]bis(methylene)]bis- (9CI) (CA INDEX NAME)



RN 119165-63-8 CAPLUS
CN Phosphonic acid, [[[2-[[2-[methyl(phosphonomethyl)amino]ethyl](phosphonomethyl)amino]ethyl]imino]bis(methylene)]bis- (9CI) (CA INDEX NAME)



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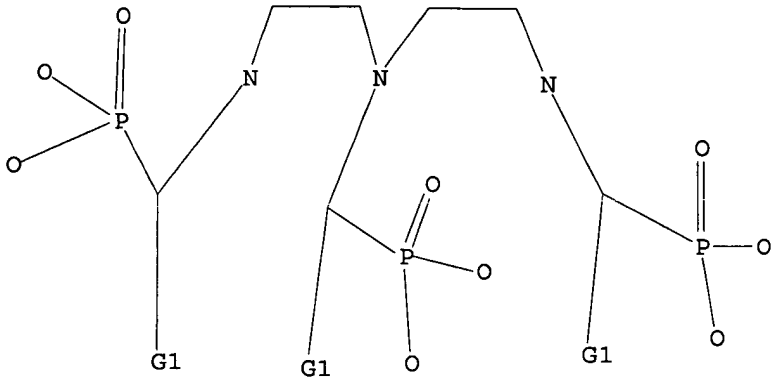
L31 HAS NO ANSWERS
L31 STR



G1 Cb,Cy,Hy

Structure attributes must be viewed using STN Express query preparation.

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L1 STRUCTURE UPLOADED
L2 9 S L1
L3 166 S L1 FULL

FILE 'CAPLUS' ENTERED AT 16:35:57 ON 13 SEP 2003
L4 1019 S L3
L5 116504 S CHELA?
L6 232 S L4 AND L5
L7 STRUCTURE UPLOADED
S L7

FILE 'REGISTRY' ENTERED AT 16:39:48 ON 13 SEP 2003
L8 0 S L7

FILE 'CAPLUS' ENTERED AT 16:39:49 ON 13 SEP 2003
L9 0 S L8

FILE 'REGISTRY' ENTERED AT 16:39:53 ON 13 SEP 2003
L10 STRUCTURE UPLOADED
L11 9 S L1
L12 0 S L10
L13 0 S L10 FULL
L14 0 S CHELA?/AB,TI
L15 0 S CHELA?/ABS,TI
L16 0 S CHELA?/AB
L17 0 S CHELA?/ABS
L18 0 S CHELA?/TI
L19 0 S TRIPODAL OR POLYPODAL

FILE 'CAPLUS' ENTERED AT 16:41:46 ON 13 SEP 2003
L20 1281 S TRIPODAL OR POLYPODAL
L21 0 S L6 AND L20
L22 500454 S MRI OR RESONANCE OR MR
L23 7 S L6 AND L22
L24 129545 S IMAGING
L25 11 S L6 AND L24
L26 5 S L25 NOT L23
L27 575153 S RADIO?
L28 19 S L6 AND L27
L29 12 S L25 OR L23
L30 14 S L28 NOT L29

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> D HIS

     (FILE 'HOME' ENTERED AT 16:35:16 ON 13 SEP 2003)

     FILE 'REGISTRY' ENTERED AT 16:35:24 ON 13 SEP 2003
L1              STRUCTURE UPLOADED
L2            9 S L1
L3          166 S L1 FULL

     FILE 'CAPLUS' ENTERED AT 16:35:57 ON 13 SEP 2003
L4         1019 S L3
L5       116504 S CHELA?
L6          232 S L4 AND L5
L7              STRUCTURE UPLOADED
                S L7

     FILE 'REGISTRY' ENTERED AT 16:39:48 ON 13 SEP 2003
L8            0 S L7

     FILE 'CAPLUS' ENTERED AT 16:39:49 ON 13 SEP 2003
L9            0 S L8

     FILE 'REGISTRY' ENTERED AT 16:39:53 ON 13 SEP 2003
L10             STRUCTURE UPLOADED
L11           9 S L1
L12           0 S L10
L13           0 S L10 FULL
L14           0 S CHELA?/AB,TI
L15           0 S CHELA?/ABS,TI
L16           0 S CHELA?/AB
L17           0 S CHELA?/ABS
L18           0 S CHELA?/TI
L19           0 S TRIPODAL OR POLYPODAL

     FILE 'CAPLUS' ENTERED AT 16:41:46 ON 13 SEP 2003
L20        1281 S TRIPODAL OR POLYPODAL

=> S L6 AND L20
L21           0 L6 AND L20

=> S MRI OR RESONANCE OR MR
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            30 MRIS
          5869 MRI
                 (MRI OR MRIS)
        439089 RESONANCE
         57982 RESONANCES
        460193 RESONANCE
                 (RESONANCE OR RESONANCES)
         37940 MR
          3162 MRS
         40498 MR
                 (MR OR MRS)
L22     500454 MRI OR RESONANCE OR MR

=> S L6 AND L22
L23           7 L6 AND L22

=> D ABS BIB HITSTR 1-7

L23  ANSWER 1 OF 7  CAPLUS  COPYRIGHT 2003 ACS on STN
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     FILE 'REGISTRY' ENTERED AT 17:15:32 ON 13 SEP 2003
L31             STRUCTURE UPLOADED
L32           0 S L31
L33           0 S L31 FULL

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